THE UNIVERSITY OF ALBERTA

THE EVOLUTION AND THE CHANGING FUNCTIONS OF A COMMERCIAL RIBBON : A CASE STUDY

by

(C) NORAH KWOK-WAH CHOW

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The undersigned certify that they have read, and recommend to the Faculty of Graduate studies for acceptance, a thesis entitled The Evolution and The Changing Functions of A Commercial Ribbon : A Case Study submitted by Norah Kwok-Wah Chow in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

Many parts of the city are in transition. This is especially evident in many of the well-established, traditional commercial ribbons. Such change has taken place largely as a result of changes in shopping habits and merchandising methods.

The evolution and the changing functional role of a commercial ribbon in the City of Edmonton are examined in this thesis. It is shown that the lineal development of the commercial land use has evolved mainly through processes of accretion, infiltration, and replacement under the impetus of various forces which include historical, geographic, economic, political and social factors. These forces in turn alter the character and the functional role of the shopping area.

It is found that the commercial ribbon comprises a great variety of commercial activities which serve not only its immediate neighbourhood, but also a much larger trading area covering essentially the entire city. The commercial ribbon is essentially a street of small businesses, but increasing numbers of space-consuming activities are being located along the ribbon serving on increasing automobile-oriented population.

The thesis also focuses on the major forms of commercial blight afflicting the ribbon. It appears that functional blight is the most severe form of blight in the study area. In varying degrees, physical, environmental and economic blight are found to affect the ribbon. In spite of these disadvantages, demands for a ribbon location do exist. It is suggested that ribbon development should be retained, though not necessarily in its present form. The study concludes that Whyte Avenue

should be subject to renewal action in order to curtail blight and maintain this type of location as an alternative for commercial and service establishments.

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I am particularly indebted to the business operators who co-operated in the study by answering the questionnaires, telephone enquires and, in many instances, granting interviews.

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INTRODUCTION

Technological innovations in transportation coupled with social and economic changes have brought changes in the commercial structure of the city. These changes have created a multiplicity of problems which have attracted the attention of planners, economists, geographers, sociologists and scholars of other disciplines. The study of the commercial structure of cities has been a major concern of urban geographers. In particular, the mushrooming development of planned shopping centres and their impact on traditional shopping areas of cities have aroused considerable interest. This thesis is concerned with the development and the changing functional role of one such traditional area, the commercial ribbon.

STATEMENT OF THE PROBLEM

Stimulus for an investigation of some aspects of a commercial ribbon arose out of concern with problems besetting the businesses on commercial ribbons in Edmonton, Alberta. One of the most crucial problems facing these ribbons is the relative decline of business activity in most of the well-established major commercial streets outside the downtown area (City of Edmonton, Planning Department, 1967a, p. 58). The decline is both actual and imminent for many of the ribbons. During the past fifteen years, major additions of retail outlets have occurred outside the traditional established retail districts in the city. New retail outlets in the form of planned shopping centres of varying sizes have developed outside the central area of the city. Major plans have been drawn up for a much greater expansion of retailing facilities at

the periphery of the city, in the form of major regional shopping centres[1] (City of Edmonton, Planning Department, 1967a, p. 56; The Edmonton Journal, June 7, 1968, p. 1).

Under the new planning concepts, traditional commercial ribbons have now come under serious criticism from planners in general and traffic engineers in particular (City of Edmonton, Planning Department, 1967a, p. 58; Wolfe, 1964, pp. 105-117). In spite of the general disapproval of ribbon development in the urban landscape, it is a subject about which relatively few empirical studies exist. What is the changing functional role of the commercial ribbon in the light of technological progress and social changes? What are the problems faced by the establishments located on commercial ribbons? The present study is undertaken in an attempt to answer these and other pertinent questions. It is primarily a case study of a commercial ribbon in Edmonton which developed during a period of relatively rapid growth. Even though this study ignores other such developments in Edmonton, it may shed light on the general subject of commercial ribbons. It is hoped that the results of the present study will be useful to Edmonton city planners in planning the future commercial land use of the city.

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[1] The Southgate Shopping Centre, on 111th Street, between 45th and 51st Avenue, will be the largest shopping complex in Western Canada. This centre is planned to open in August, 1970. Located on a 40-acre site, the shopping centre will have more than 652,000 square feet of building area, and house more than 60 retail and service firms. In addition, there will be parking facilities for about 3,200 automobiles. By 1981, Edmonton is envisaged to have another major regional shopping centre in the northeast residental area

REVIEW ON THE LITERATURE ON COMMERCIAL RIBBONS

The linear form of commercial development abutting a traffic artery is known by such terms as " a string street, " " a business thoroughfare, " " a shoe-string development, " " a strip development, " or " a commercial ribbon. "

Current conditions and perceived changes in the commercial retail structure have generated a considerable number of research studies. However, a disproportionate share of these studies have been devoted to the central business district. The changes and problems facing the major shopping streets have not been subject to the same degree of intensive research.

A review of the literature fails to bring out a clear consensus as to what functionally constitutes a commercial ribbon. A number of the studies have shown that such streets are a highly specialized form of development along major traffic toutes, and that they are characterized by a great variety of retail and service establishments. Proudfoot (1937a) observed that major thoroughfares serve a dual function. They serve as business streets with widely spaced convenience and shopping goods establishments, and also serve as traffic arteries carrying heavy traffic. String streets as observed by Rolph (1931) are highly specialized forms of urban retail development found along traffic arteries. He concluded that "... the class of traffic using the artery determine the lind and quality of merchandise sold on string street and, consequently, the volume of business " (p. 5). Ratcliffe (1963, p. 412) noticed that the nature of uses along the commercial ribbon depends upon the extent to which the street is the major traffic arterial route and

the degree to which it is the core of a residential area. Uses serving the artery and uses so intended for the abutting area are both attracted to the arterial route. He also noted that functions serving the residential areas appear as nucleated "beads" in the street developments.

Studies have demonstrated that commercial ribbons not only possess a wide variety of establishments, but also each establishment has a mixed functional role. A study of United States Highway 41 in Illinois and Wisconsin has shown that while many of these establishments cater almost exclusively to residents of nearby urban communities, those primarily serving transient customers also attract a considerable number of local customers (Grotewold, 1958, pp. 236-244). Boal and Johnson's studies of commercial ribbons in Calgary show that establishments on ribbons have a dominant functional emphasis with one major trip type, but all establishments are dependent to varying degrees on both "Special Trips" and "Through Trips," and varying degrees of functional overlap for all establishments exist (Boal and Johnson, 1965, pp. 154-169; idem, 1968, pp. 329-343). The changing role of commercial ribbons was noted by Simmons (1964, p. 133) in his study of Chicago. He noticed that the character of ribbons is becoming more diversified. These ribbons included a greater variety of business types and more high-order functions. The functions complexity of ribbon developments is summed up by Boal and Johnson:

> Commercial ribbons are multifunctional. This can be observed by examining the types of establishments on any particular ribbon ranging from (say) motels and gas stations to drug stores and supermarkets. The ribbons are also multifunctional in that any particular establishment may perform a number of roles... . Finally the ribbons are multifunctional in spatial terms in that portions of the ribbon may have concentrations of such

> functions as motels while other portions may be dominated by food stores, drug stores, and beauty and barber shops (1968, p. 330).

A few studies have touched on the nature of commercial ribbons. In particular, Merry's study (1955) of a string development in Denver, Colorado reveals the different locational habits of various types of establishments on the ribbon. It was found that the concentration of certain types of retail and service establishments and the degree of retail development depend upon factors such as traffic volume on either side of the street and population density in the immediate areas. Similar finding are shown in Nelson and Forster's study of the Ventura Boulevard (Forster and Nelson, 1958). An examination of ribbons in Ann Arbor, Michigan, by Boal reveals:

> "They have much in common in their convenience facilities but the nature and layout of these ribbons is clearly affected by location in relation to a particular market and to the availability or otherwise of space for particular type of construction" (Boal, 1963, p. 109).

A few studies by geographers have noted the phenomenon of commercial blight. In particular, studies by Berry (1963) and Simmons (1966) have demonstrated that commercial ribbons, especially those located in the older neighbourhoods, are most vulnerable to commercial blight.

In spite of the complexity in the nature and the function of commercial ribbon, Berry (1967, p. 46) developed a system of classification on the basis of groups and conformations of business types. As a result, several kinds of ribbons were distinguished: highway-oriented, urban arterial, new suburban ribbons and the traditional shopping ribbons. Specialized areas, such as automobile-rows, or furniture districts could also appear in a linear form.

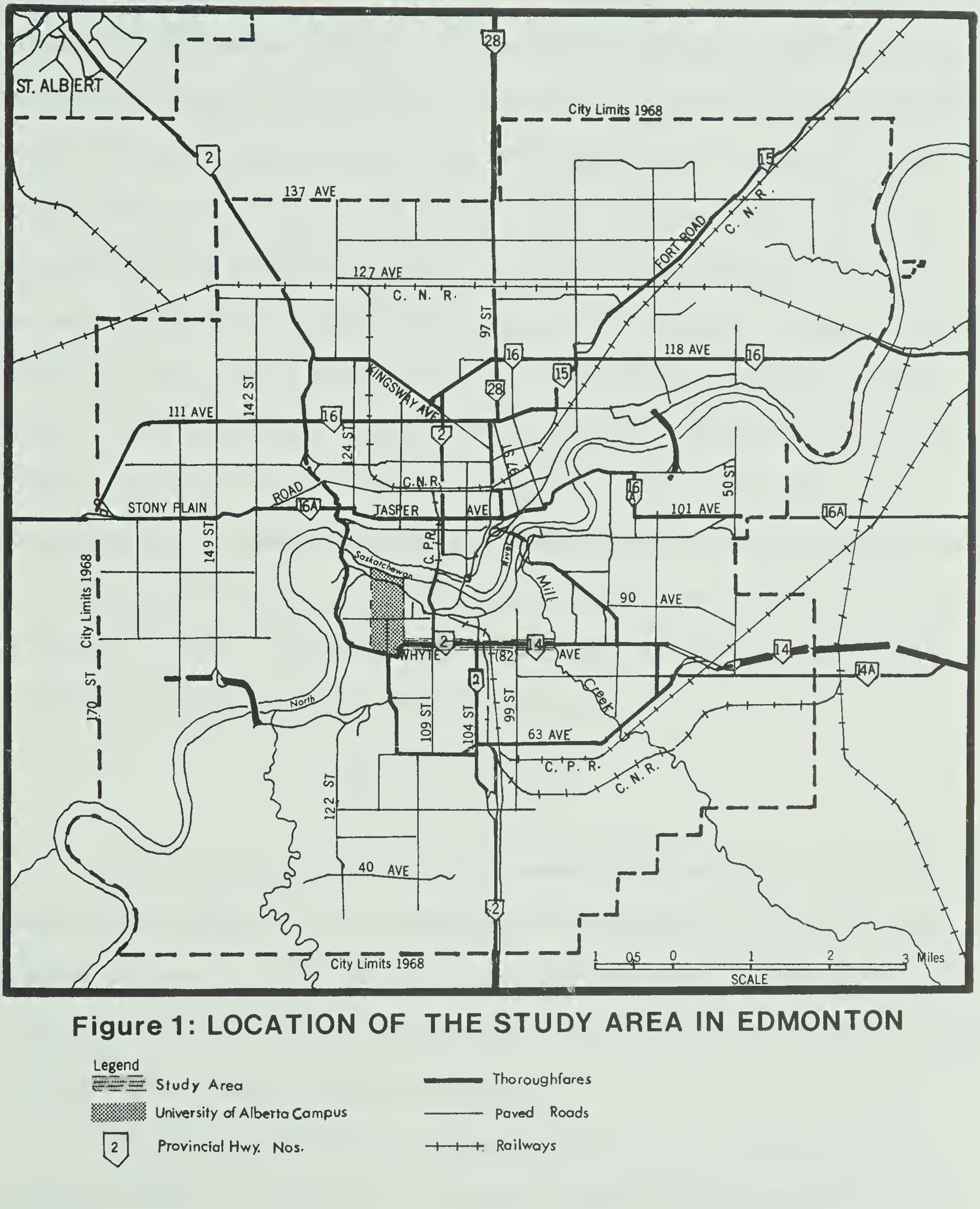

Figure 1: LOCATION OF THE STUDY AREA IN EDMONTON

Legend

- Study Area
- University of Alberta Campus
- Provincial Hwy. Nos.
- Thoroughfares
- Paved Roads
- Railways

It has been demonstrated in several studies that central place theory is applicable to the analysis of size, spacing, and functions of nucleated shopping centres located within cities (Berry, 1963 and 1964; Simmons. 1964; Garner, 1968). Arguments and premises inherent to central place theory are sufficient to provide a logical and satistactory description of the hierarchy of retail nucleations. However, central place theory, at least at its present form, is found to be inadquate in stretches of highway-oriented or urban arterial business distracts as well as specialized functional areas. In a study of Spokane, Phoenix, and Cincinnati, Berry noted that the nucleated conformations were compatible with the central place hierarchic system, but the arterial conformations were not (in Garrison, et. al., 1959, pp. 67-69). Berry concluded that "Some broader body of theory seems necessary to account for the spatial structure of all types of retail and service business" (1959a, p. 154). These studies suggest the physical variability and multifunctional nature of commercial ribbons.

SCOPE OF THE STUDY

This study is limited to the commercial development fronting on Whyte Avenue, Edmonton, extending from 112th Street to the Mill Creek Ravine (Figure 1). For the most part, this frontage is parallelled by relatively density populated residential area consisting of older detached housing and newer walk-up apartments.

This portion of Whyte Avenue was chosen for investigation for several reasons. Firstly, it is one of the most well-established commercial ribbons in the city. It shows a high degree of continuity,

forming an almost continuous business frontage, and a greater diversity of retail and service establishments than in other such developments in the city. Secondly, it is one of the principal thoroughfares of the city. And finally, the historical significance of this street is of interest in itself for it is the oldest shopping street in South Edmonton.

The study is organized into the following parts:

1. A historical account of the development of the commercial ribbon with principal emphasis on the changing land use functions and patterns.
2. An analysis of the nature and functions of the present commercial establishments on Whyte Avenue, and factors influencing their location.
3. An analysis of the various forms of commercial blight associated with ribbon development.
4. An analysis of locational preferences of commercial establishments on the ribbon.
5. Summary and conclusion.

SOURCES OF INFORMATION

The method employed in conducting the research for this study was devised so that it could be employed for future studies of a similar nature in cities of a size comparable to Edmonton. Four approaches were used to acquire the information necessary for the study: library research on the historical development of the ribbon, a contemporary land use survey of the ribbon, a questionnaire survey of businesses on the ribbon, and research into the government records relevant to the present study.

Research Into The Historical Development

With regard to the historical development of the commercial ribbon on Whyte Avenue, Edmonton, the Henderson's Street Directories for Edmonton proved to be adquate for the purpose of analysing land use changes. However, one limitation to this source was the frequent difficulty of differentiating between the upper and ground floor uses. Commercial land uses along Whyte Avenue were mapped for the years 1914, 1921, 1931, 1941, 1951 and 1961. The selected years were considered close enough in time to demonstrate the significant commercial changes. The commercial land use was classified into eleven major groups and their sub-groups using the Standard Industrial Classification Manual, with some modifications (see Appendix A). This classification system insures compatibility of the various groups over the entire period of time. By mapping and analysing the land changes for these selected dates, a comprehensive picture of the evolution and the changing function of the commercial ribbon development on Whyte Avenue can be presented.

Other historical data concerning the development of the Whyte Avenue area is scanty in spite of the fact that it was the principal centre of business activity of the former Town of Strathcona. Early writings on Strathcona lacked a scientific and objective approach. In most cases, they seem to have been concerned with presenting as favourable a picture as possible of the prosperity of the town in order to attract outside investments. Some old land use maps from the various civic departments and reports were also examined, but most of them proved to be too generalized. Research in the Provincial Museum and Archives

in Edmonton yielded a few historical photographs which proved to be invaluable in obtaining a glimpse of the conditions that existed along Whyte Avenue in its early days of development.

Contemporary Land Use Survey

A land use survey was carried out in order to gain first-hand knowledge of the study area. The field survey was undertaken by the writer during the summer and fall of 1968. This consisted of inspecting and mapping in detail the land uses on base maps of a scale of one inch to 100 feet. The name and address of each establishment was also recorded.

Questionnaire Survey

The questionnaire survey was designed primarily to aid in determining the contemporary nature, function and commercial blight of the businesses on Whyte Avenue. The themes upon which the questionnaire was compiled are as follows:

1) Nature of the commercial development includes information on the number of employees, amount of operating space, type of tenure, and annual rent of the individual establishments.
2) Information on the function of the commercial development consists of the extent of the trade area, the types of customers served and their mode of transportation. Factors influencing location are also included.
3) Data on commercial blight: operators were asked questions concerning the physical conditions of their building, business condition, length of occupancy, aesthetic qualities

of the ribbon, operation problems, and their reasons for relocation.

4) Operators' attitudes were obtained with regard to the type of shopping area in which they would like to locate.

The first commercial questionnaire was compiled and tested in two commercial ribbons in Edmonton in October, 1968. Problems which appeared at this stage were corrected and the final questionnaire which was used in the present study appears in Appendix B. A total of 317 questionnaires were distributed by mail to the business operators along Whyte Avenue in January, 1969. Three churches, one hospital and one post office located along the ribbon were ommitted because of the nature of their operation. These establishments however, were classified as business establishments in the present study. Of the total 317 questionnaires dispatched, 139 were completed and 37 were returned unanswered. Among the latter, 27 moved during the period between the time of field survey and the date of dispatch. At this point, some of the advantages and limitations of the mail questionnaire as a data-collecting technique will be discussed. Among the former, relative cheapness and speed are the most important; among the latter, the problem of non-response stands out. Non-response in general is a problem to the researchers. There is the likelihood that the non-respondents differ significantly from the respondents, so that estimates based on the latter are biased. Steps for increasing the rate of response have been taken, such as stamped addressed envelops were sent along with the questionnaire and assurance of confidentiality. Follow-up requests, enclosing a copy of the questionnaire and a stamped addressed envelop were sent to the non-respondents. At the end of the survey period, it was found that there

is a good representation of respondents from every business type. Appendix C shows the number returned from each business type. However, care must be taken from the problem of bias that arises from the non-response in certain aspects of the commercial ribbon. This will be discussed in the study when such bias to the result of the questionnaire arises. Since approximately 48 per cent of those receiving questionnaires in the study area returned them, it was felt that reasonably accurate conclusions can be drawn.

Research into Government Records

Information concerning other aspects of the land use such as lot size, building coverage, land and building assessment value, age of building and condition of building was obtained through research into the land and property assessment rolls in the City Assessors Department. The amount of operating space for each business establishment was obtained from the business assessment records in the same department.

Other sources of information for this thesis included personal communication with business operators and city planners. In recent years, the Planning Department of Edmonton has carried out a series of urban studies on the various aspects of the city. These studies proved to be of much use as background information.

CHAPTER I

THE EVOLUTION AND THE CHANGING COMMERCIAL FUNCTIONS OF WHYTE AVENUE, 1914-1968

The commercial structure of Whyte Avenue had its beginning when Strathcona was first founded as the northern terminus of the Calgary-Edmonton Railway in 1891. The avenue became one of the major commercial centres in the city. The commercial land use is complex in function, composed of a great variety of retail and service activities. Some of the traditional functions have decayed or disappeared from the commercial scene, while others are emerging in response to economic and social changes. An examination of the evolution and the changing functions of commercial development on Whyte Avenue is the main focus of this chapter.

The present chapter will be organized in the following manner. The evolution of the commercial ribbon will be described. This will be followed by a historical account of the growth of South Edmonton in order to understand the forces which produced the growth and later the expansion of the commercial development on Whyte Avenue. The commercial development will be analysed for the period up to 1914 and than at intervals of ten years from 1921 to 1961.

EVOLUTION OF WHYTE AVENUE, 1914-1968

The term "evolution" as used in this study connotes the development of the commercial ribbon as brought about by the historical, social, economic, political, and other physical determinants at work in the

city and its region as a whole. The evolution of the commercial ribbon may be explained through processes of accretion, infiltration and replacement. Webster's Dictionary (Gore and Webster, 1965) defines "accretion" as "increase by external addition or accumulation (as by adhesion of external parts or particles)" or "the increase or extension of the boundaries of land or the consequent acquisition of land accruing to the owner by the gradual or imperceptible action of natural forces". The term "accretion" is used in this study to describe the expansion or increase or extension of the original shopping nucleus or nuclei by additions of new establishments or building structures. The term "infiltration" as defined in Webster's Dictionary (ibid.) is "a gradual penetration by scattered units." It also means "to enter or become established in (as an organization) gradually or unobtrusively". In this study, "infiltration" is used to describe the process of the infilling of business establishments between the commercial structures by occupying vacant spaces. With regard to the term "replacement", Webster's Dictionary (ibid.) gives the meaning of "a new fixed asset or portion of an asset that takes place of a discarded one." Therefore, replacement, as used in this study refers to the clearance of the original land uses by rebuilding new structures, or the conversion of the old structures by new commercial uses, thus becoming an integral part of the commercial ribbon.

The evolution of the commercial ribbon from its initial development to its present form is presented in Figure 2. This evolution is later revealed through a series of profile charts (Figure 13). These maps were prepared from the data gathered through a numerical count of the commercial establishments on Whyte Avenue as recorded by the

EVOLUTION OF THE COMMERCIAL RIBBON ON WHYTE AVENUE 1914-1968

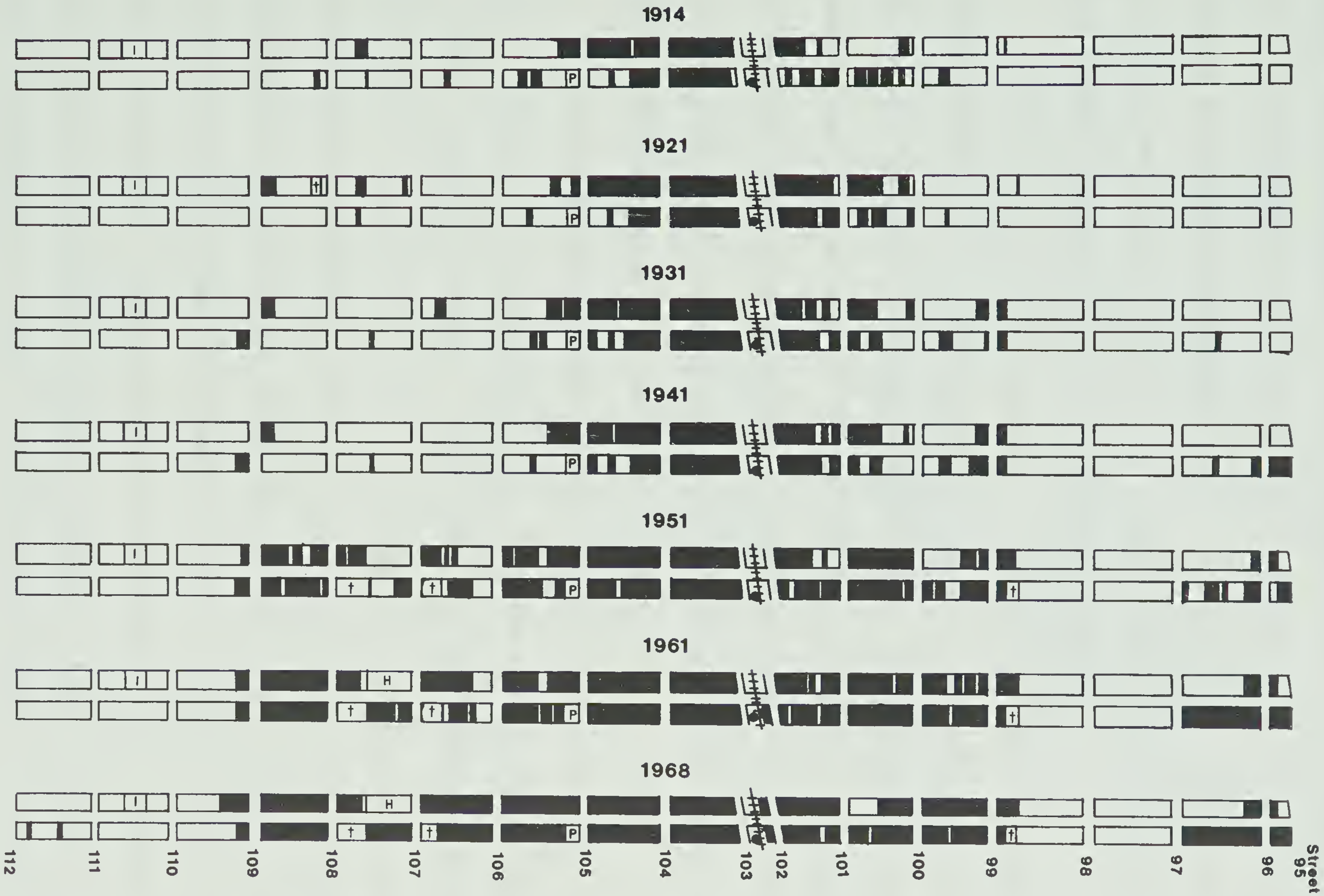

Figure 2

Legend: Commercial land use H Hospital † Church P Post office Canadian Pacific Railway Tracks ● Station I Institution

0 500 1000 1,500 Ft.
Scale

SOURCES: HENDERSON'S EDMONTON DIRECTORIES, 1914, 1921, 1931, 1941, 1951, 1961, 1967.
1968 FIELD WORK

<u>Henderson's Directories</u> for the selected study dates.

The eastward and westward extension form the original core is apparent from Figure 2. It can be noted that the growth of the ribbon has not developed at a uniform rate. The growth has resulted mainly through processes of accretion and infiltration. The process of replacement was also of significant importance, especially during the more recent evolution of the commercial ribbon.

The process of accretion is evident in the eastward and westward expansion of the original nucleus with the original centre forming the nucleus around which later development aggregated. This can be seen by the lengthening of the original core centred at the intersection of 104th Street and Whyte Avenue. Accretion was largely responsible for the continuous frontage as well as for the much higher density of commercial development along this section of the ribbon.

Isolated development away from the central core is also noticeable. Much of this development was located at the major intersections of 109th and 99th Streets. Both 109th and 99th Streets are major north-south arterial routes in the city (Figure 1). One hundred and nineth Street leads to the High Level Bridge and also to the 105th Street Bridge, while 99th Street leads to the Low Level Bridge. These bridges were and still are the principal entrances to the central business district in Edmonton. The presence of the street-car lines, which were later replaced by trolly coaches, and still later by motor buses, enhanced the importance of these intersections (Figures 3 and 15).[1] These

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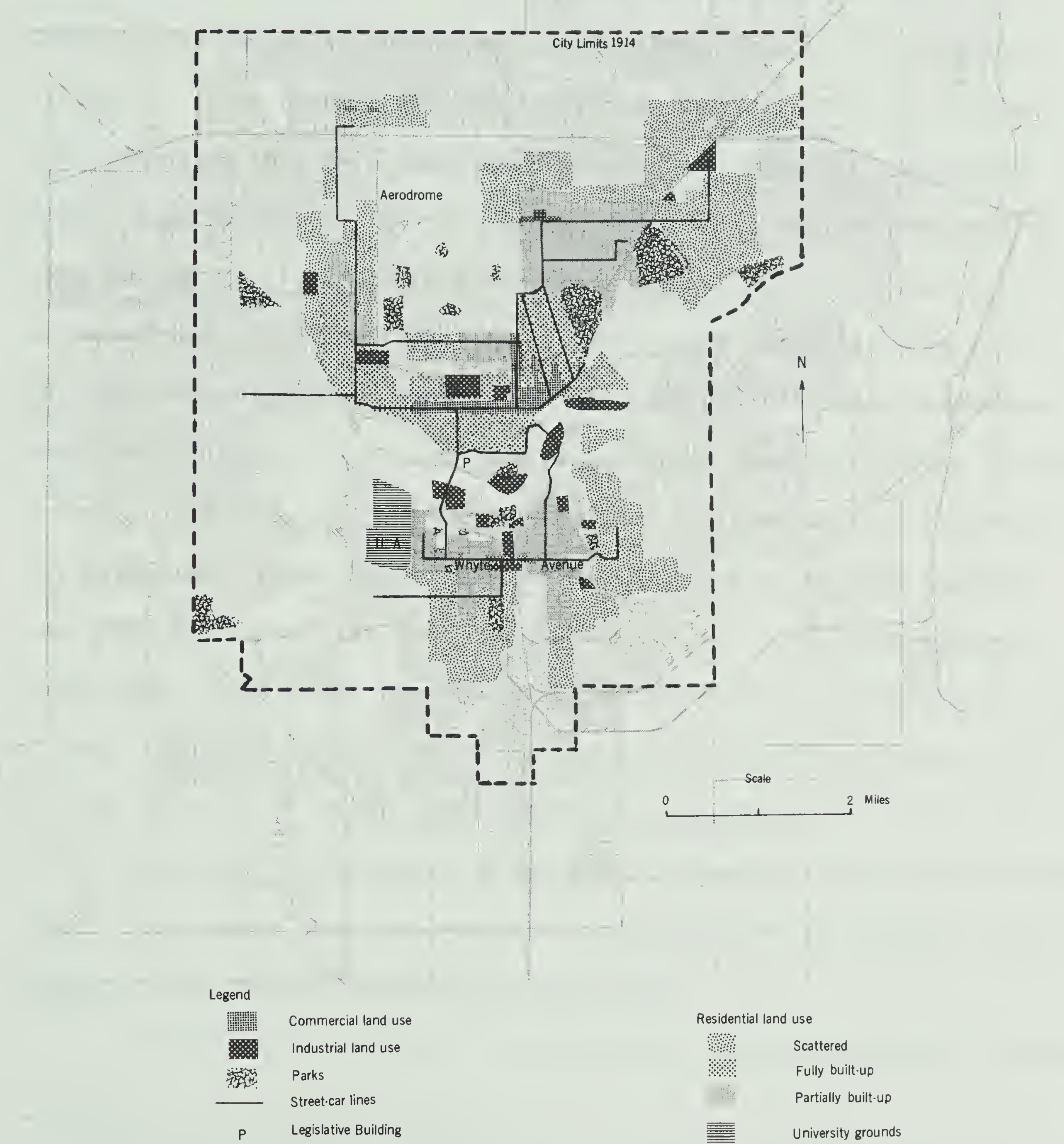
1 All routes in the city were operated by street-car for the period 1908-31. In 1930, there were two motor bus routes. Route 7 operated on 102nd Avenue from 124th Street to 147th Street. Route 8

Figure 3
GENERALIZED LAND USE MAP OF EDMONTON 1914



SOURCES: MUNDY'S MAPS OF EDMONTON, 1911 1912
HENDERSON'S DIRECTORY 1914

isolated locations of commercial development formed the nuclei around which later commercial establishments tended to cluster.

Infiltration of commercial establishments between these sub-centres also helped to contribute to the linear form of the commercial structure. This process was facilitated by the fact that most of the lots bordering this main thoroughfare were left empty and undeveloped prior to World War II. Residential or other forms of land use development was strikingly sparse and isolated, and many of these lots were not developed until the 1950s. Many people were obtaining properties for speculative purposes during the land boom of 1911-1912. But when the boom collapsed, ownership often reverted to the city because of tax arrears. The long years of depression that followed further aggravated the situation. Money was scarce for new development because the land was zoned for commercial uses, (City of Edmonton, Interim Development Bylaw 1339, 1933). The land was also too expensive to be developed for a lower type of land use. As a result empty lots were not taken up until the arrival of another boom initiated by the discovery of gas and oil in 1947 and the subdequent substantial increase in population of the city. These empty lots provided easy occupation and assemblage of more space for new forms of commercial activities.

In contrast to some of the commercial ribbons developed in other

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serviced by motor bus was started from the University of Alberta along 88th Avenue from 109th Street to 112th Street. The first coach started operation on September, 1939 as shown on Figure 15. Street-car system was changed to trolly bus during the period 1940-50. The final street-car operation was terminated on September 1951 (Per. Comm. Mr. MacDonald, Edmonton Transit System, October, 1968).

cities which were mainly the result of successive replacement of other forms of developed land as a result of the changes in the zoning regulations (Merry, 1955, p. 11), replacement has not been dominant on Whyte Avenue. Most of the developments on Whyte Avenue were mainly residential intermingled with a few industrial uses. The process of replacement of the old residential structures did not become significant until the 1950's, when the commercial lots were needed as a result of the general economic boom in the city. Traditional as well as new forms of commercial activities thereafter located on this ribbon. The 33-foot lot proved to be insufficient for many of these new functions, which are mainly accounted for by the increasing number of space-consuming activities such as motor vehicle sales, gasoline service stations and other automobile related services (Plate 1). Demolition of isolated structures between the empty lots was therefore necessary in order to provide continuous frontages for these new activities, and also for the existing establishments to provide parking space for their customers. The later need became more urgent as most of the establishments found that a majority of their customers arrived by means of private motor cars instead of the traditional mass transit system. The planned neighbourhood shopping centre, the Strathcona Shopping Centre (Plate 2) located between 99th and 100th Streets developed in the 1960's was constructed in the form of strip development with free parking space provided. This illustrates how the former commercial structure attempted to adjust itself and accommodate the new shopping habits which are largely a change in the mode of travelling. Replacement was to some degree encouraged by the zoning of the land on both sides of the avenue, mainly between 109th

Plate 1: Continuous frontage of car lots.

Plate 2: Planned neighbourhood shopping centre: Strathcona Shopping Centre located between 99th and 100th Street on Whyte Avenue.

and 99th Streets, for commercial uses (City of Edmonton, Interim Development Bylaw 1339, 1933). As a result, single-family residential land use no longer was profitable on this area in view of the higher land tax had to pay. Under such economic pressure, residential structures were replaced or converted for commercial uses (Plate 3). Industrial concerns also moved out to the industrial districts of the city where they could have more space and where they could enjoy the facilities associated with modern industrial operation.

The evolution of the commercial development along Whyte Avenue can therefore be explained through processes of accretion, infiltration and replacement.

HISTORICAL ACCOUNT OF SOUTH EDMONTON BEFORE WORLD WAR I

The growth of the South Edmonton settlement and its subsequent urban development stemmed from the coming of the Calgary-Edmonton Railway, a branch line of the Canadian Pacific Railway. The railway stimulated expansion of this area in all realms: commercial, agricultural, and industrial. The settlement first appeared as the homes of a few pioneers on the south bank of the North Saskatchewan River opposite the village of Edmonton - the original settlement of the present City of Edmonton. Figure 4 shows the Edmonton settlement in 1883 which included the community lying on the south of the river. The Canadian Pacific Railway reached Calgary in September, 1883, and it was not until July, 1891 that a branch line, the Calgary and Edmonton Railway, was completed to the south bank of the North Saskatchewan River. A pattern of urban

Plate 3: Conversion of residential dwellings to commercial uses.

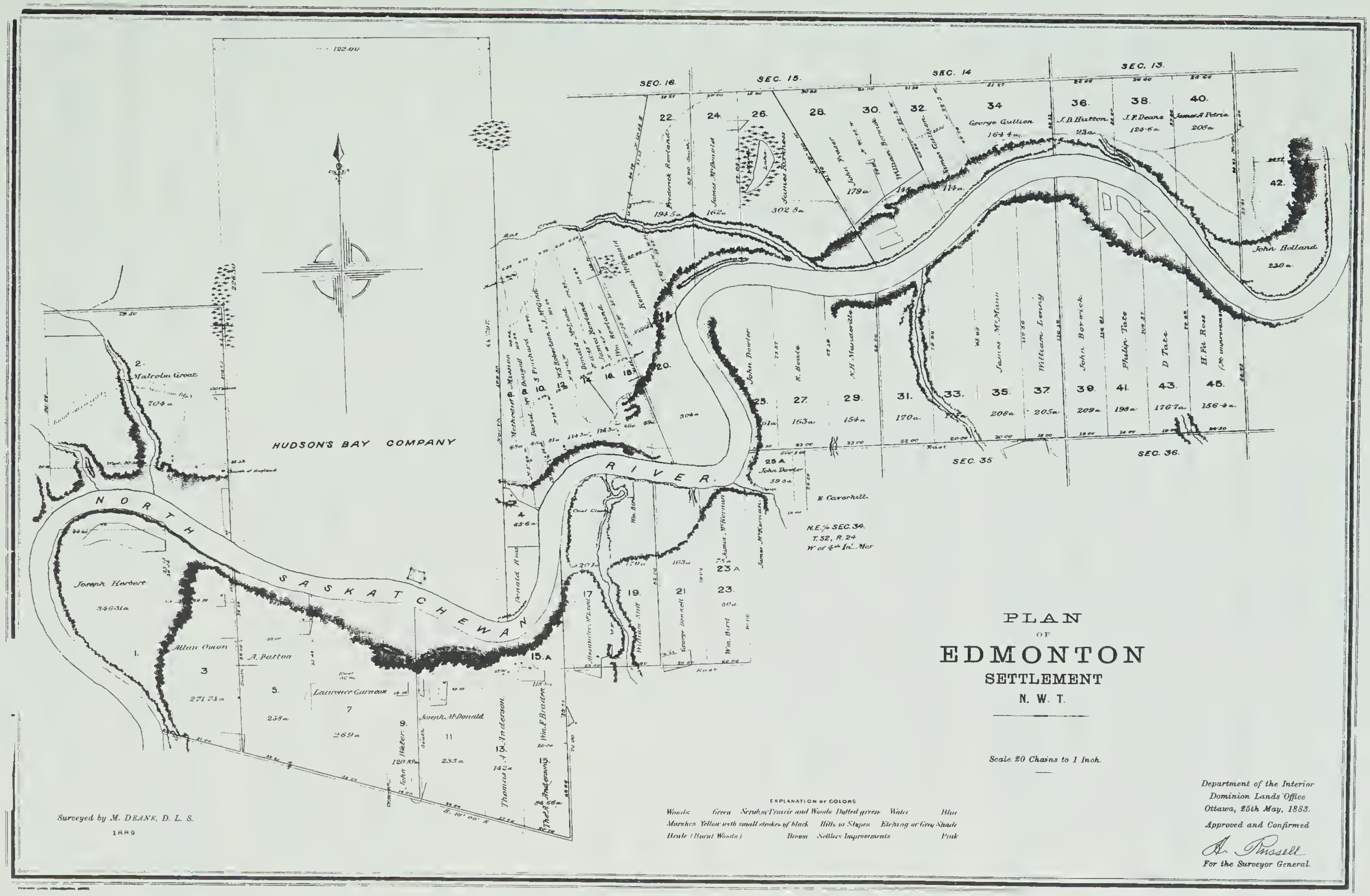


Figure 4

EDMONTON SETTLEMENT 1883

Source: Planning Department, City of Edmonton

settlement then evolved in the vicinity of the railway station. Promoters and supporters of this new town made great efforts to stimulate urban development in this area (McGregor, 1963, p. 203; Ockley, 1932, pp. 311-14). In 1889, the settlement obtained its first incorporation under the name of Strathcona, in honour of Lord Strathcona and Mount Royal, High Commissioner for Canada in England, and one of the pioneer builders of the Great Canadian West (The Edmonton Bulletin, Edmonton, n.d. p. 73).

The area around the railway station became the focal point of commercial and social activities of the Town of Strathcona. It was here that the major residential settlement tended to concentrate. Whyte Avenue, which was named after Sir William Whyte of the C.P.R., was the principal thoroughfare in this developing town. Along this avenue, the first hotel - Strathcona House, was constructed. Real estate offices flourished along Whyte Avenue for the convenience of the new immigrants. Mercantile transactions were carried on in the same area. The distribution of the commercial and industrial land uses of the embryonic town was shaped and later solidified by the location of the railway facilities. The general land use pattern as influenced by the presence of the railway can be seen clearly from Figures 3 and 5. Plates 4,5,6,and 7 give a general picture of the main commercial centre of Strathcona in its early days of development.

On March 15, 1907, Strathcona, with a population of 3,500, was incorporated as a city. The city had enlarged its boundaries to take in 5.98 square miles (Figure 6). On April 6, 1907, Premier A.C. Rutherford announced that the site of the provincial university would be located in Strathcona. The period between 1907-1908 was regarded as years of

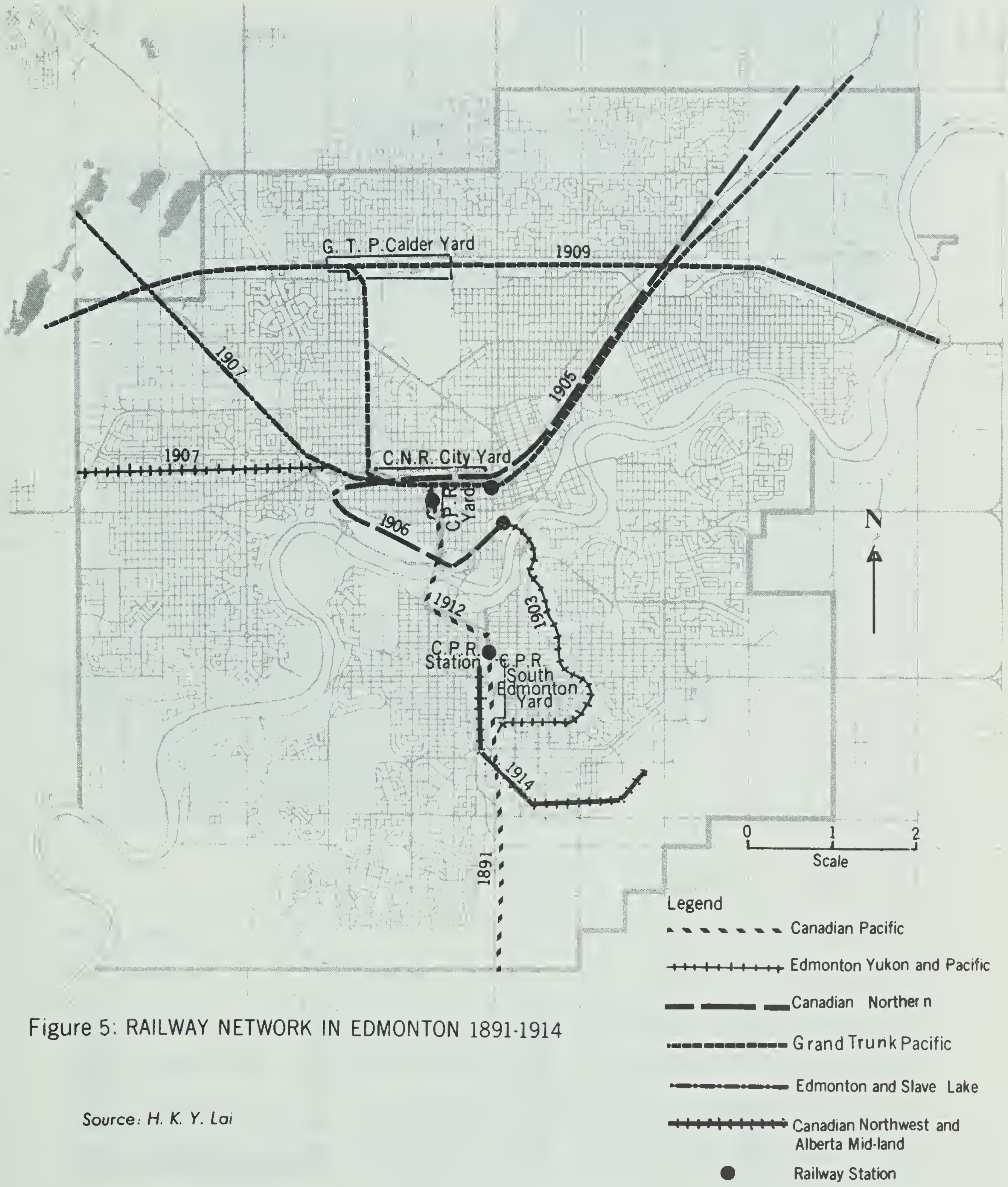
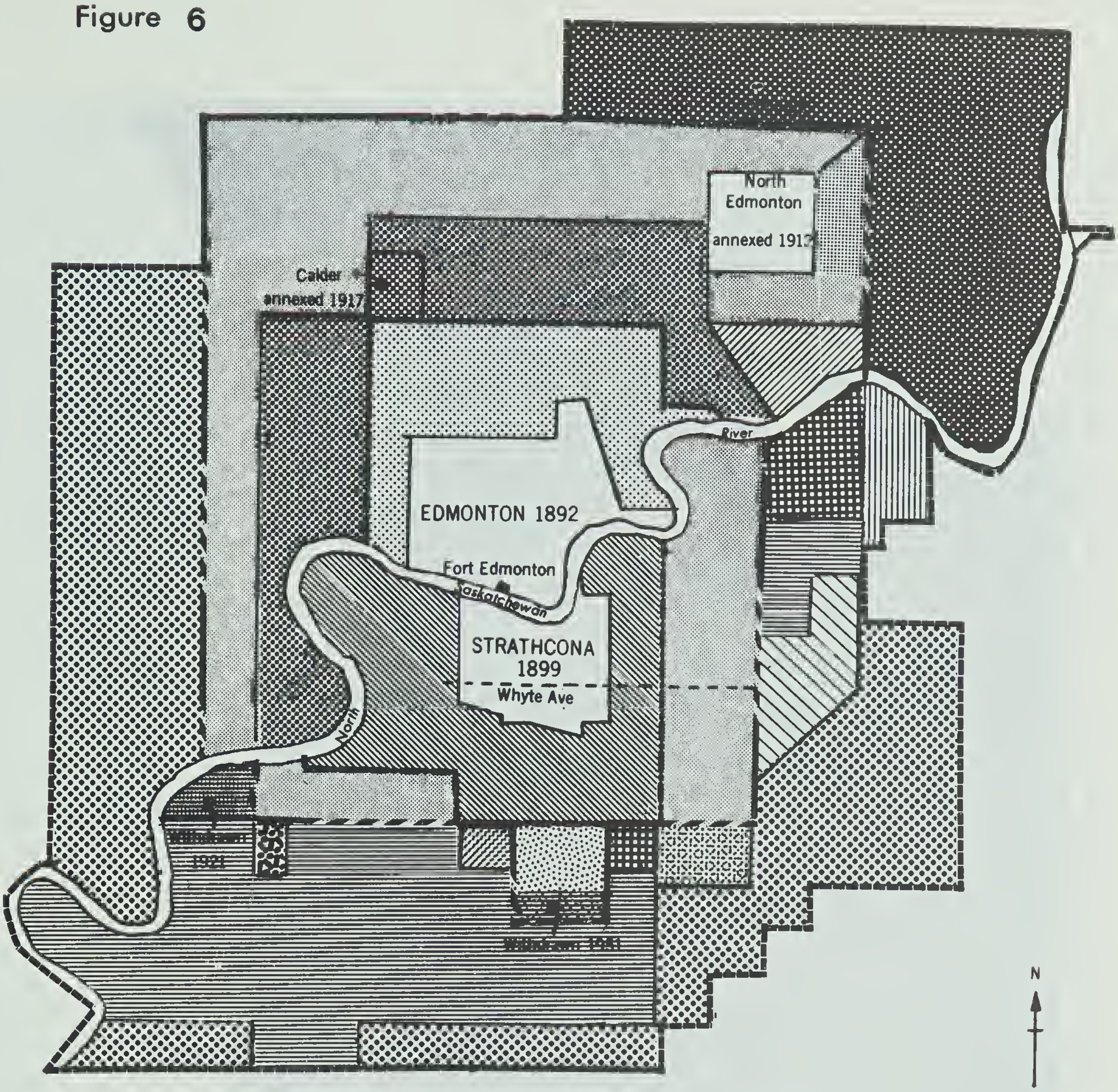


Figure 5: RAILWAY NETWORK IN EDMONTON 1891-1914

Source: H. K. Y. Lai

Figure 6



GROWTH OF EDMONTON TO 1968

AREAS ANNEXED

Before Amalgamation

ANNEXED IN 1904
ANNEXED IN 1907
ANNEXED IN 1910
ANNEXED AT AMALGAMATION IN 1912

After Amalgamation

ANNEXED IN 1912
ANNEXED IN 1913
ANNEXED IN 1914
ANNEXED IN 1947
ANNEXED IN 1950
ANNEXED IN 1954
ANNEXED IN 1956
ANNEXED IN 1958
ANNEXED IN 1959
ANNEXED IN 1960
ANNEXED IN 1961
ANNEXED IN 1964

BOUNDARY OF CITIES OF EDMONTON AND STRATHCONA
CITY BOUNDARY 1914
CITY BOUNDARY 1968

Scale in Miles

0 1 2

Sources: After J. G. Mac Gregor
City Planning Department

Plate 4 Whyte Avenue Looking West 1895 *Courtesy of Provincial Museum and Archives of Alberta*

Plate 5 Whyte Avenue Looking West 1903 *Courtesy of Provincial Museum and Archives of Alberta*

Plate 6 Whyte Avenue Looking West 1910

Courtesy of Provincial Museum and Archives of Alberta

Plate 7 Whyte Avenue Looking East 1914

rapid growth for both the twin cities. In 1911, the proposed extension of the C.P.R. trackage to Edmonton via the High Level Bridge together with the proposed amalgamation of these two cities threw the citizens into great excitement. Many newcomers came to invest in business of one sort or another, and also to acquire houses. Real estate offices, dealing in city lots and farm lands, sprang up along Jasper Avenue, First Street, and 97th Street in Edmonton and Whyte Avenue in Strathcona (Niddrie, 1965, p.1). A number of business blocks such as the Tipton Block, the Hulbert Block, the Whyte Block, and part of the Commercial Hotel were constructed in Strathcona with a main concentration on Whyte Avenue. The establishment of a depot at 104th Street and 80th Avenue by the Camrose Subdivision of the Canadian Northern Railway in 1914 further strengthened the commercial core of South Edmonton (Figure 5).

The two cities were amalgamated in 1912, when the Provincial Legislature passed the Edmonton-Strathcona Amalgamation Act. By its terms, the one-time rivals coalesced under the name Edmonton, with a combined area of 23 square miles. By 1914, annexations had increased the total area to 40 square miles (Figure 6). With the coming of World War I in 1914 the boom ended and "... many buildings, both commercial and residential, were empty, a condition which ruined many a property owner" (Niddrie, 1965, p. 6).

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE UP TO 1914

The 1914 commercial land use pattern reveals a major concentration at the intersection of 104th Street and Whyte Avenue (Figure 7). This can be identified as the nodal point or the commercial core area in

Figure 7: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1914

TYPES OF BUSINESS																		N	S	N § S	%	CUMULATIVE %
Food Group				●			○○ ●	○○ ●●	○○○ ●●		○○○ ●●	○ ●						11	9	20	11.76	11.76
General Merchandise								○○	○ ●●				●					3	3	6	3.53	15.29
Automobile Group								●			○							1	1	2	1.17	16.47
Apparel and Accessories						●		○○ ●	○ ●●									3	4	7	4.11	20.59
Hardware, Furniture and Household Appliances							○	○○ ●	○○ ●		○ ●●							6	4	10	5.88	26.47
Other Retail Drugs Stores								○○	○ ●		○							4	1	5 18	10.59	37.06
Others							○ ●	○○	○○○○ ●●		○ ●●							8	5	13		
Finance Group Banks								●	○○ ●									2	2	4 33	19.41	56.47
Others					○		●●	○○○○○ ●●●●	○○○○○ ○○○○ ●●●●		○○○ ●							18	11	29		
Community Services Medical						○ ●	●	○○○○	●●			●	○					6	5	11		
Billiards § pool rooms									○ ●●		●							1	3	4 20	11.76	68.23
Others							○○	○○			●							4	1	5		
Personal Services Shoe repairs							●	○ ●				○○ ●						3	3	6		
Barber § Beauty shops								●	○○ ●									2	2	4		
Cleaners § Laundries					●		○○	●			○ ●	●						3	4	7 36	21.17	89.41
Hotels						●		●	○○ ●									2	3	5		
Restaurants								●●●●●	●●●		○ ●	●						1	10	11		
Others								○	○○									3	0	3		
Services to Business	●							○○ ○○	○○○ ●●●●			○						8	5	13	7.65	97.06
Miscellaneous Services								○ ●	○		○○							4	1	5	2.94	100.00
Sub-total: North Side	0	0	0	0	1	1	8	30	34	0	16	2	1	0	0	0	0	93				
South Side	1	0	0	1	1	3	6	20	29	0	11	4	1	0	0	0	0		77			
Total	1	0	0	1	2	4	14	50	63	0	27	6	2	0	0	0	0					
Grand Total																				170	100.00	
Street	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96						

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE Each symbol represents one business establishment plotted by occurrence in the block

SOURCE: HENDERSON'S DIRECTORY, 1914

Figure 8: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1921

TYPES OF BUSINESS																			N	S	N § S		%	CUMULATIVE %
Food Group	Candy § Confectionery							○		○○		○●							4	1	5			
	Meat § grocery stores				○	○			○○			○○	○						7	0	7	18	12.86	12.86
	Meat markets								○●	○●		●							2	3	5			
	Others									●									0	1	1			
General Merchandise									○	○○○○●●		○●●●							6	5	11		7.86	20.72
Automobile Group	Gas stations								○			○	○		○				4	0	4	7	5.00	25.72
	Others								○●			○							2	1	3			
Apparel and Accessories										○									1	0	1		0.71	26.43
Hardware, Furniture and Household Appliances	Hardware									●		●							0	2	2			
	furniture								●			●							0	2	2	9	6.43	32.86
	Household appliances									○									1	0	1			
	Others								○○	●		○							3	1	4			
Other Retail	Drug stores								○	○●									2	1	3	14	10.00	42.86
	Others			●		○			○●●	○○●●		○	○						6	5	11			
Finance Group	Banks								●	○●									1	2	3			
	Real estates					○			○○●	○○○									6	1	7	13	9.28	52.14
	Others									●●		○							1	2	3			
Community Services	Medical					○			○○●●	○●●									4	4	8			
	Recreational								○	●●									1	2	3	20	14.28	66.42
	Others				○	○		●	○○○○	○○									8	1	9			
Personal Services	Shoe repairs				○				○○○					○					5	0	5			
	Barber § Beauty shops								●	○○○●									3	2	5			
	Cleaners § Laundries					●		○				○●	●						2	3	5	28	20.00	86.42
	Restaurants								●●	○●●●		●							1	6	7			
	Hotels									○○●									2	1	3			
	Others								○	●●									1	2	3			
Services to Business	Legal								●	○●									1	2	3	6	4.29	90.71
	Others									●●			●						0	3	3			
Miscellaneous Services								○	○○○○○○●	○		○●●		○					10	3	13		9.29	100.00
Sub-total : North Side		0	0	0	3	5	0	3	29	27	0	11	3	2	1	0	0	0	84					
	South Side	0	0	1	0	1	0	1	14	26	0	11	2	0	0	0	0	0		56				
Total		0	0	1	3	6	0	4	43	53	0	22	5	2	1	0	0	0						
Grand Total																					140		100.00	
Street		111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96							

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE Each symbol represents one business establishment plotted by occurrence in the block

SOURCE: HENDERSON'S DIRECTORY, 1921

Figure 9: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1931

TYPES OF BUSINESS																			N	S	N § S		%	CUMULATIVE %
Food Group	Bakery shops				○				○	○									3	0	3			
	Candy § Confectionery								○○	○		●					●		3	2	5			
	Meat § grocery stores			●	○				○○	○○○○ ●●		○○	○	○					11	3	14	31	19.25	19.25
	Meat markets				○				○	○ ●●		●●							3	4	7			
	Others									○ ●									1	1	2			
General Merchandise										○○○○ ●●		○ ●●							5	4	9		5.59	24.84
Automobile Group	Gas stations				●			○	●						○ ●				2	3	5	11	6.83	31.67
	Others								○ ●	○			○ ●	●					3	3	6			
Apparel and Accessories									○○	○○○									5	0	5		3.11	34.78
Hardware, Furniture and Household Appliances	Hardware stores								○	○ ●		●							2	2	4	8	4.97	39.75
	Furniture								●										0	1	1			
	Household appliances								○										1	0	1			
	Others								○			○							2	0	2			
Other Retail	Drug stores				○				○	○ ●				○					4	1	5	17	10.56	50.31
	Others					○			○ ●●●	○○○○ ●●●									6	6	12			
Finance Group	Banks								●	○ ●									1	2	3	8	4.97	55.28
	Real estates								○○○	○									4	0	4			
	Others									●									0	1	1			
Community Services	Medical					○			○○ ●●	○ ●●									4	4	8	20	12.42	67.70
	Recreational									●●									0	2	2			
	Others							●	○○○○○ ○○	●●									7	3	10			
Personal Services	Shoe repairs								○○ ●			○○○							5	1	6	33	20.50	88.20
	Barber § Beauty shops								○ ●	○○○ ●●		○		●					5	4	9			
	Cleaners § Laundries					●		○	○			●	●						2	3	5			
	Restaurants								○	○ ●●●●●		○ ●							3	6	9			
	Hotels								●	○ ●									1	2	3			
	Others				○														1	0	1			
Services to Business	Legal								●	●●									0	3	3	11	6.83	95.03
	Others							○		○○○○		●●	○						6	2	8			
Miscellaneous Services									○ ●●	○		○○		○○					6	2	8		4.97	100.00
Sub-total: North Side		0	0	0	5	2	0	3	32	35	0	11	3	4	1	0	0	0	96					
South Side		0	0	1	1	1	0	1	15	30	0	10	2	2	1	0	1	0		65				
Total		0	0	1	6	3	0	4	47	65	0	21	5	6	2	0	1	0						
Grand Total																					161		100.00	
Street		111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96							

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE Each symbol represents one business establishment plotted by occurrence in the block

SOURCE : HENDERSON'S DIRECTORY, 1931

Figure 10: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1941

TYPES OF BUSINESS																		N	S	TOTAL		%	CUMULATIVE %
FOOD STORES: Bakery shops				○				○	○									3	0	3			
Candy § confectionery								○	○							●		2	1	3			
Meat § grocery stores				○				○○	○○○○		○○○○	○	●●					12	2	14	29	18.12	18.12
Meat markets			●					○○	○ ●			●						3	3	6			
Others									●●		●							0	3	3			
GENERAL MERCHANDISE									○○○○ ●●		●							4	3	7		4.37	22.49
AUTOMOBILE GROUP: Gas stations				●			○	●			●			○ ●		●		2	5	7	12	7.50	29.99
Others								○ ●	○				●	○				3	2	5			
APPAREL § ACCESSORIES:								○○	○									3	0	3		1.88	31.87
HARDWARE § HOME FURNISHINGS: Hardware stores									○ ●		○○ ●							3	2	5			
Furniture																		0	0	0	10	6.25	38.12
Household appliance stores								○	○									2	0	2			
Others							●	○			○							2	1	3			
OTHER RETAIL: Drug stores				○				○	○ ●				○					4	1	5	18	11.25	49.37
Others					○			○○ ●●●●●	○ ●●●●									4	9	13			
FINANCE GROUP: Banks								●	○ ●									1	2	3			
Real estates								○○										2	0	2	7	4.37	53.74
Others								●	○									1	1	2			
COMMUNITY SERVICES: Medical					○			○○ ●●	●●									3	4	7			
Recreational			●					○	●●●									1	4	5	18	11.25	64.99
Others							●	○○○	●●									3	3	6			
PERSONAL SERVICES: Shoe repairs							○ ●	●			○○		●					3	3	6			
Barber § Beauty shops				○				○○○○○ ●	○○○ ●●●●		○ ●		●					10	7	17			
Laundries § cleaners					●		○	○			●	●	●					2	4	6	41	25.63	90.62
Eating Places									○○ ●●●●●									2	5	7			
Hotels								●	○ ●									1	2	3			
Others				○							○							2	0	2			
SERVICES TO BUSINESS: Legal services								●	●									0	2	2	6	3.75	94.37
Others							○		○○		●							3	1	4			
MISCELLANEOUS SERVICES:								○ ●	○○ ●		○○		○				●	6	3	9		5.63	100.00
Sub-total: North Side	0	0	0	5	2	0	4	29	29	0	13	1	2	2	0	0	0	87					
South Side	0	0	2	1	1	0	3	16	31	0	7	2	6	1	0	2	1		73				
Total	0	0	2	6	3	0	7	45	60	0	20	3	8	3	0	2	1						
Grand Total:																				160		100.00	
Street	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96							

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE Each symbol represents one business establishment plotted by occurrence in the block

SOURCE: HENDERSON'S DIRECTORY, 1941

Figure 11: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1951

TYPES OF BUSINESS																			N	S	N § S		%	CUMULATIVE %
Food Group	Bakery shops				○	●			○								●		2	2	4			
	Candy § Confectionery								○								●		1	1	2			
	Meat § grocery stores			○●	○	○	○	○	○○	○○○●		○○		●●●●			●●		12	8	20	33	12.41	12.41
	Meat markets								○○	○									3	0	3			
							●					●●●							0	4	4			
General Merchandise									●	○○○●●		●●							3	5	8		3.01	15.42
Automobile Group	Gas stations				●			○	●			●			○●		●		2	5	7	17	6.39	21.81
	Others					●	○●		●	○		○	○●●					○	5	5	10			
Apparel and Accessories					○○○○●●			○●	○○○○○	○○○○●				●					14	5	19		7.14	28.95
Hardware Furniture and Household Appliance	Hardware stores				○		○		○	○		○○●●		●			●●		6	5	11			
	Furniture								○										1	0	1	25	9.40	38.35
	Household appliances				○○			○●	○										4	1	5			
	Others				○○			●		●		○	○○				●		5	3	8			
Other Retail	Drug stores				○		○		○	○●				○●					5	2	7			
	Others				○○●●●	○		○●	○○○○○●●	○●●●●			○●●						11	12	23	30	11.28	49.63
Finance Group	Banks				○●				○●●	○●									3	4	7			
	Real estates				○		○○○		○○●	●									6	2	8	17	6.39	56.02
	Others								○	○									2	0	2			
Community Services	Medical				○○	○			○○○●●●	○●				○○					9	4	13			
	Recreational			●	●			○		●●●									1	5	6	28	10.53	66.55
	Others					●●	●	○●		●●			●		●				1	8	9			
Personal Services	Shoe repairs				●			●	○			○○		○●					4	3	7			
	Barber § Beauty shops				○○			○○	○●	○○○○●●		●●		○○●●			○		12	7	19			
	Cleaners § Laundries				○○		●	○●	○○○			●		○●					7	4	11			
	Restaurants				○	●		○○	○	○○○●●●●				○●			○		9	6	15	58	21.80	88.35
	Hotels								●	○●									1	2	3			
	Others				○				○			○							3	0	3			
Services to Business	Legal								○○										2	0	2			
	Others				○○○○○●●	○		○	●	○○●●									9	5	14	16	6.01	94.36
Miscellaneous Services					○○●●●	○		●	●	○			●●●●	●				●	4	11	15		5.64	100.00
	Sub-total: North Side	0	0	1	13	5	7	13	36	29	0	9	4	8	1	0	2	1	147					
	South Side	0	0	2	14	5	4	8	15	27	0	11	9	13	2	0	8	1		119				
	Total	0	0	3	45	10	11	21	51	56	0	20	13	21	3	0	10	2						
	Grand Total																				266		100.00	
Street		111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96							

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE

Each symbol represents one business establishment plotted by occurrence in the block

SOURCE: HENDERSON'S DIRECTORY, 1951

Figure 12: DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1961

TYPES OF BUSINESS																		N	S	N § S		%	CUMULATIVE %
Food Group Bakery shops				○○				○	○			○						5	0	5			–
													●					0	1	1			
Meat § grocery stores			○		○●	○○	●	○	○			○	●●			○○●		9	5	14	26	7.26	7.26
Meat markets									○		○	●						2	1	3			
Others						●					●●							0	3	3			
General Merchandise				○				●	○○○●		○●							5	3	8		2.23	9.49
Automobile Group Gas stations				●				●					○	○●		●		3	4	7			
Auto. accessory, parts etc.							○●		●							●	○	2	3	5			
Motor vehicle dealers (new § old)				●	●	○●				●	○●	○●	○○			●	●	5	8	13	31	8.66	18.15
Motor vehicle dealers (used)						●●						○						1	2	3			
Others								●			○	●						1	2	3			
Apparel and Accessories				○○○●●				○○○○	○○○○●●									11	4	15		4.19	22.34
Hardware, Furniture § Household Appliances Hardware stores				○				○○	○●●		●	○	●			●		5	5	10			
Furniture								○○			○		○					4	0	4			
Household appliances				○			○○	○○	○○●			○					●	8	2	10	34	9.50	31.84
Others				○○●			●	○			○○●	●				●		5	5	10			
Other Retail Drug stores				○		○		○○○●	●				○●					6	3	9			
Others				○○○○○	○○○○		○○	○○○○○○○○○○○●●●●	○●●		○○	●●	●●					25	10	35	44	12.29	44.13
Finance Group Banks				○○●			●	○○●●	○●				●					5	6	11			
Real estates				○●●		○	○○○○○○○●	●●●			○	○	●			○●		12	8	20	43	12.01	56.14
Others				○○○	○○		○○	○○○			○		●					11	1	12			
Community Services Medical				○○○○○	○		○●●	○○○○○○○○○○○●●●	○●●				○●					20	8	28			
Recreational			●	●			○		●●			●				●		1	6	7	48	13.41	69.55
Others				○○●	●	●	○○○●	○●				●		●				6	7	13			
Personal Services Shoe repairs				●			●	○			○○○		○					5	2	7			
Barber § Beauty shops			●	○○○●●			○	○○○●●●●	○○○●●		○	●	○○●			●●		13	13	26			
Cleaners § Laundries				○○				○○			●		●					4	2	6			
Restaurants				○○○		●	○○○	○○	○○○●●●●		○	○●	○			○●●		15	8	23	67	18.72	88.27
Hotels								●	○●									1	2	3			
Others											○		●					1	1	2			
Services to Business Legal							●	●●										0	3	3			
Others				○○○○○●●●			○○○	○○○○○●	○○		○		●			○○		17	5	22	25	6.98	95.25
Miscellaneous Services				○○●	○	○		○○●	○●		○●	●●●	●				●	8	9	17		4.75	100.00
Sub-total: North Side	0	0	1	44	9	6	27	58	26	0	19	9	9	1	0	6	1	216					
South Side	0	0	2	17	3	6	10	26	23	1	8	13	16	2	0	12	3		142				
Total	0	0	3	61	12	12	37	84	49	1	27	22	25	3	0	18	4						
Grand Total:																				358		100.00	
Street	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96							

Legend: ○ NORTH OF THE AVENUE ● SOUTH OF THE AVENUE Each symbol represents one business establishment plotted by occurrence in the block

Source: Henderson's Directory, 1961

Figure 13 (a-g)

Profile Charts: Number of Business Establishments in Blocks Within The Whyte Avenue Commercial Development: 1914-1968

Figure 13 a

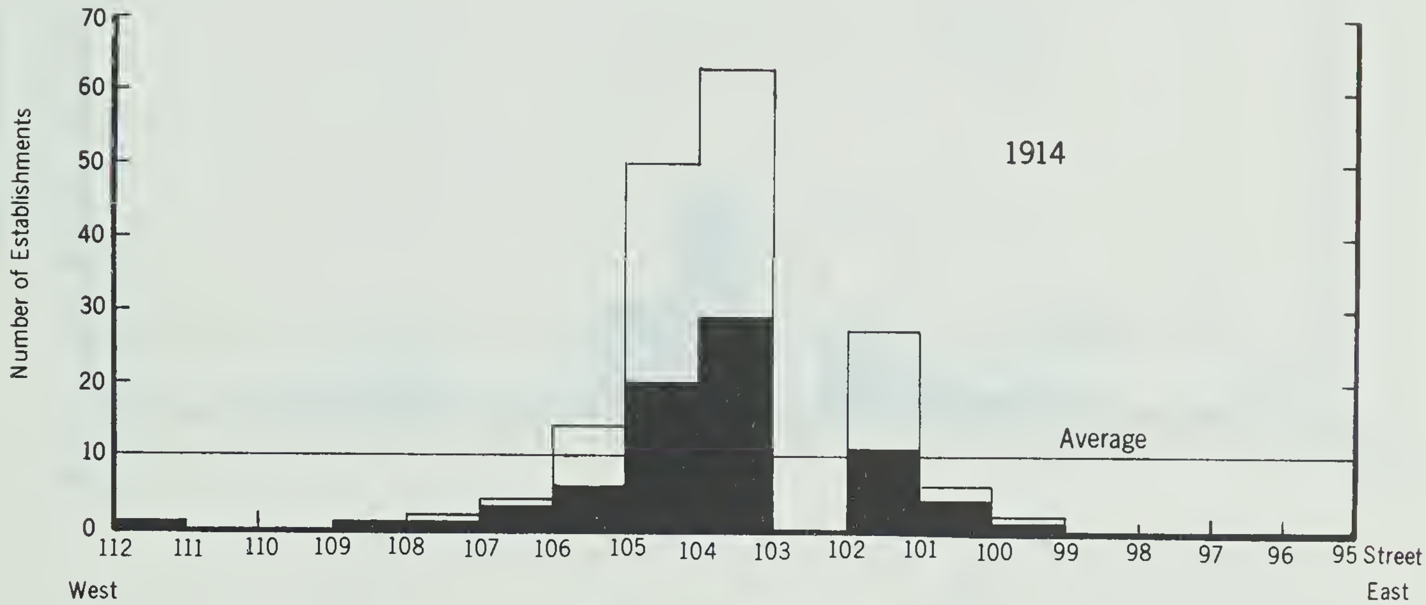


Figure 13 b

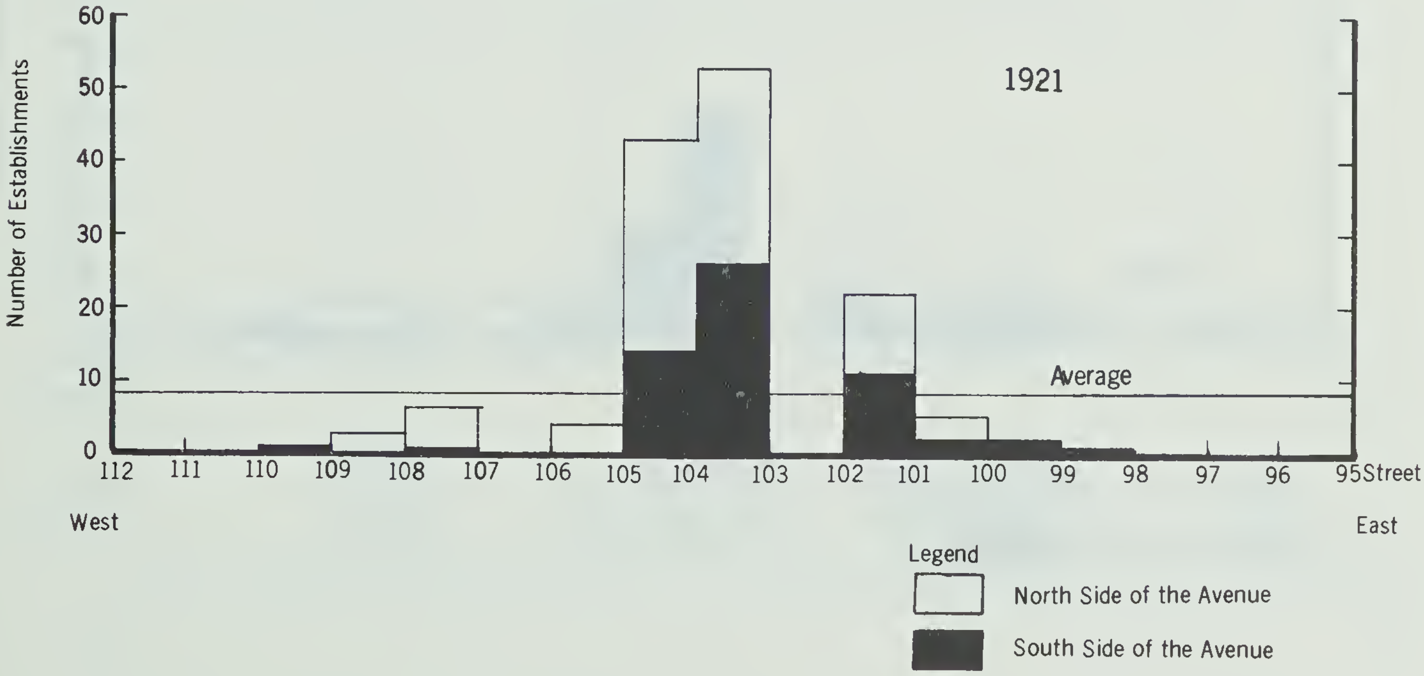


Figure 13 c

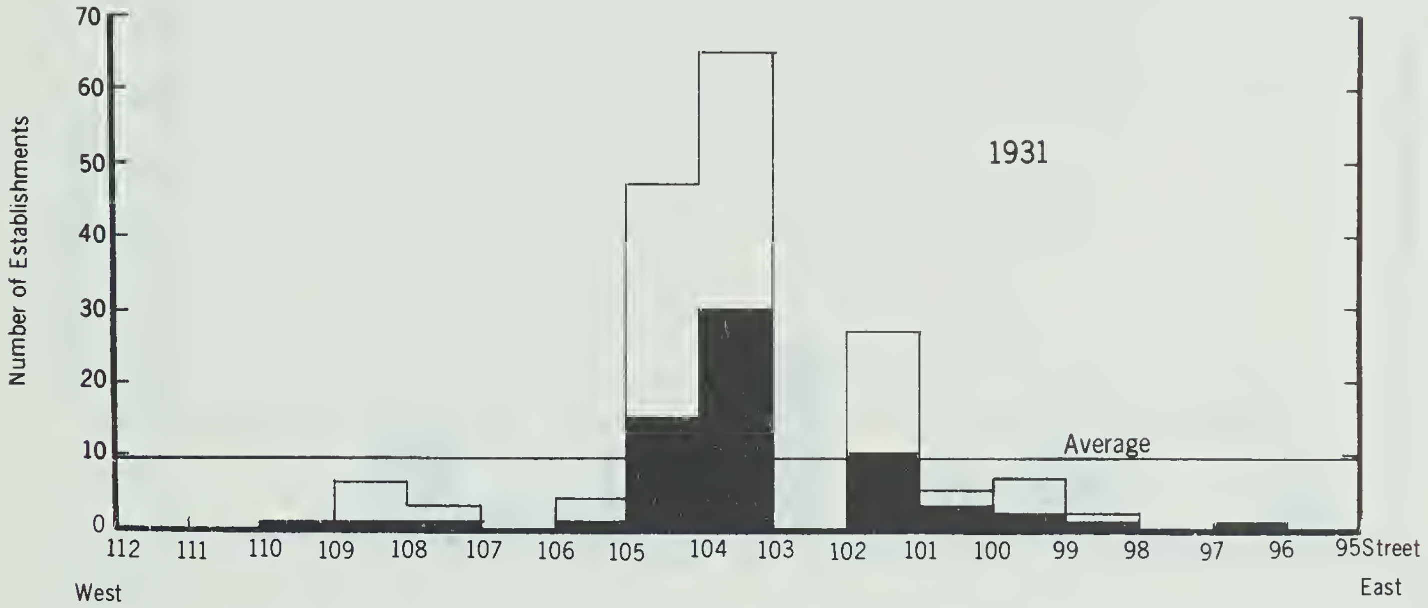


Figure 13 d

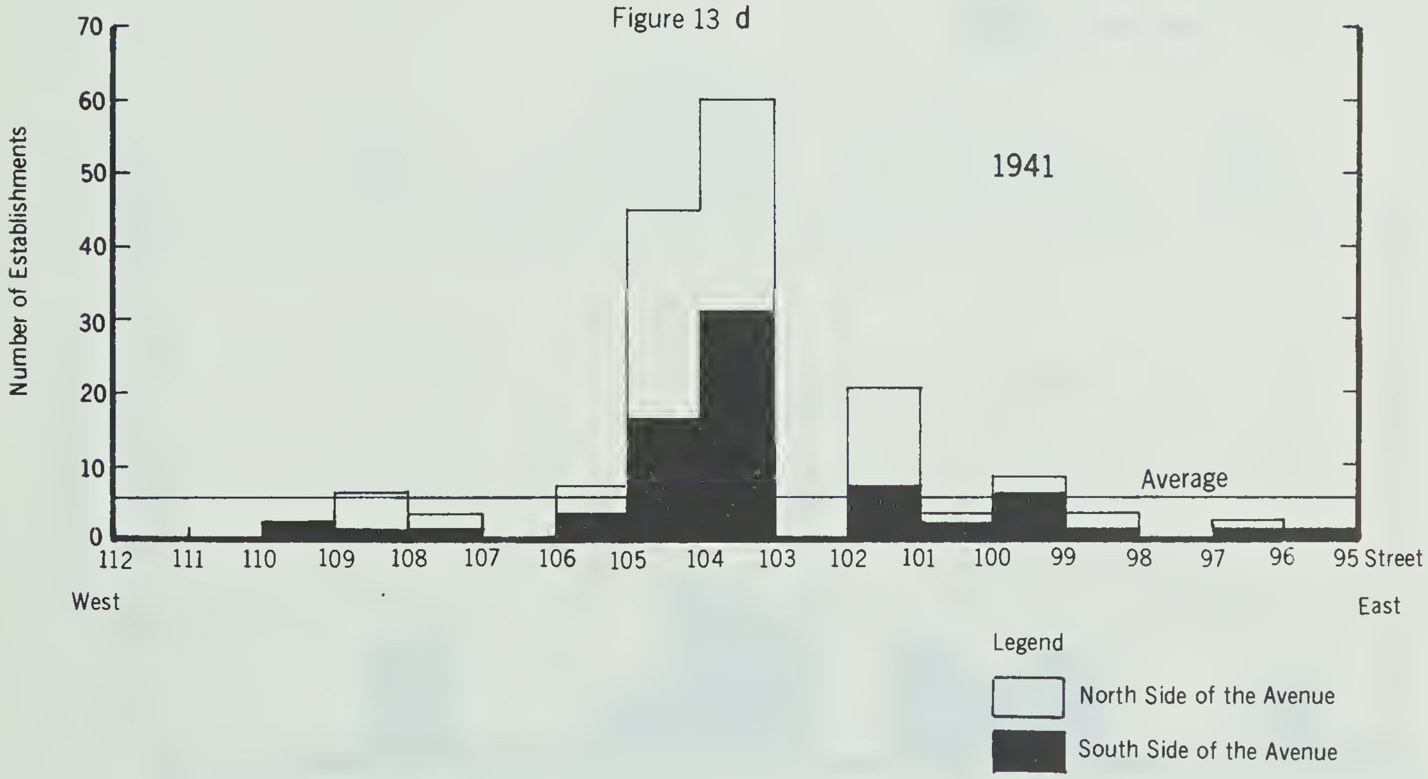


Figure 13 e

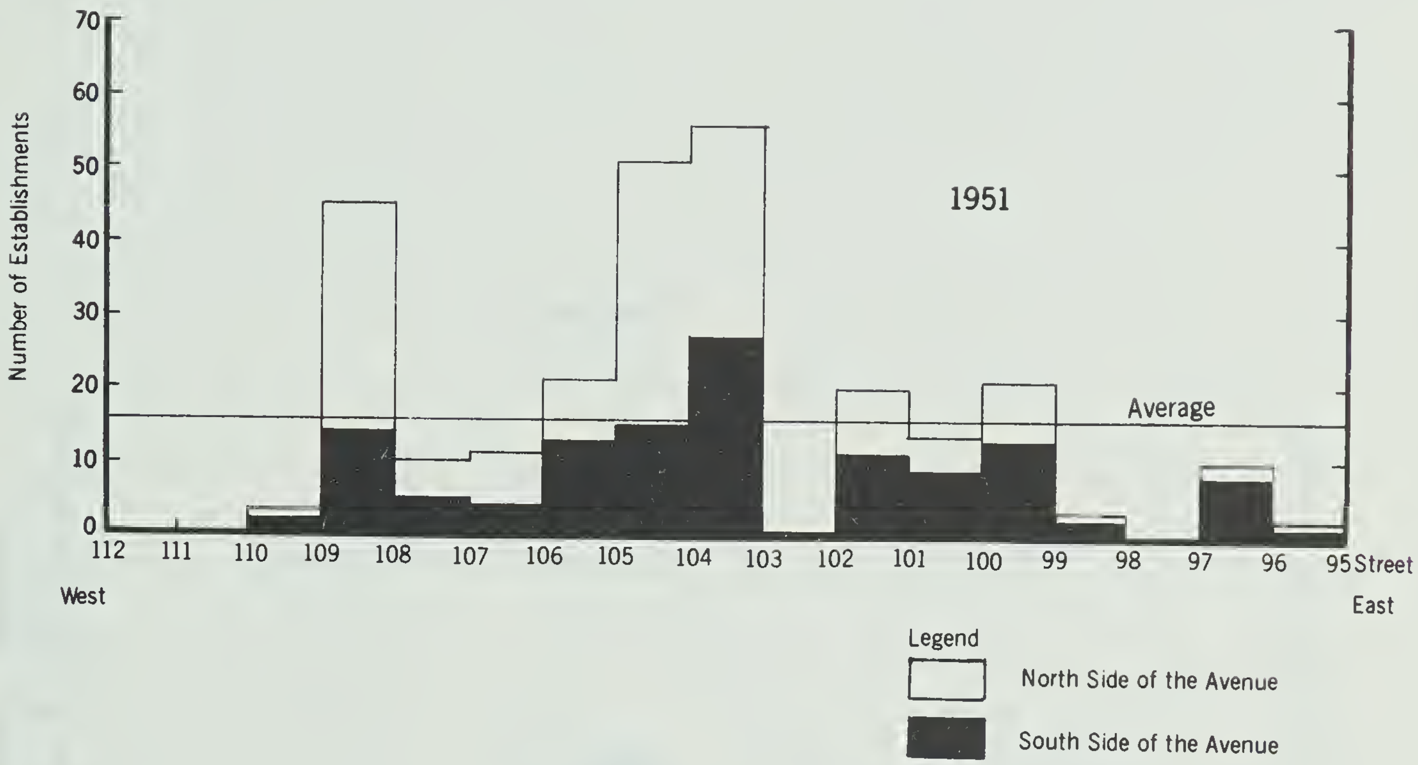


Figure 13 f

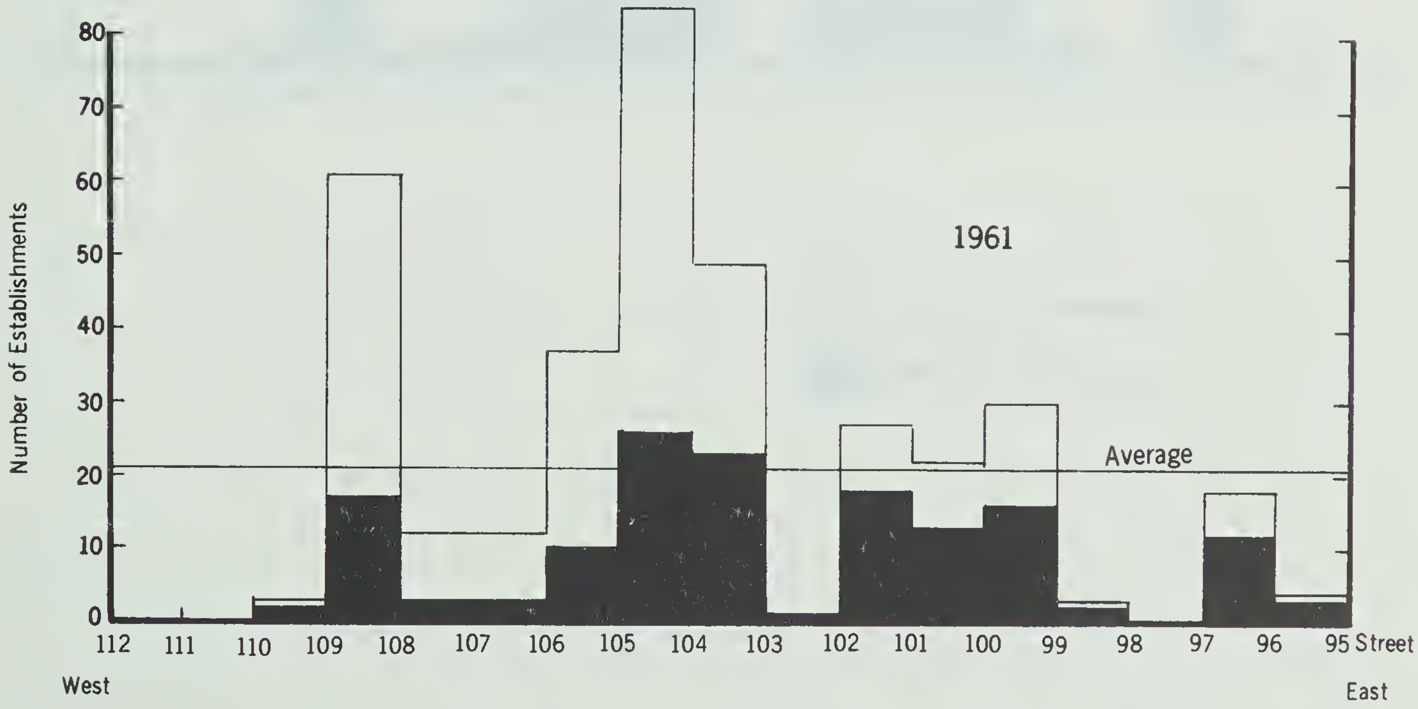
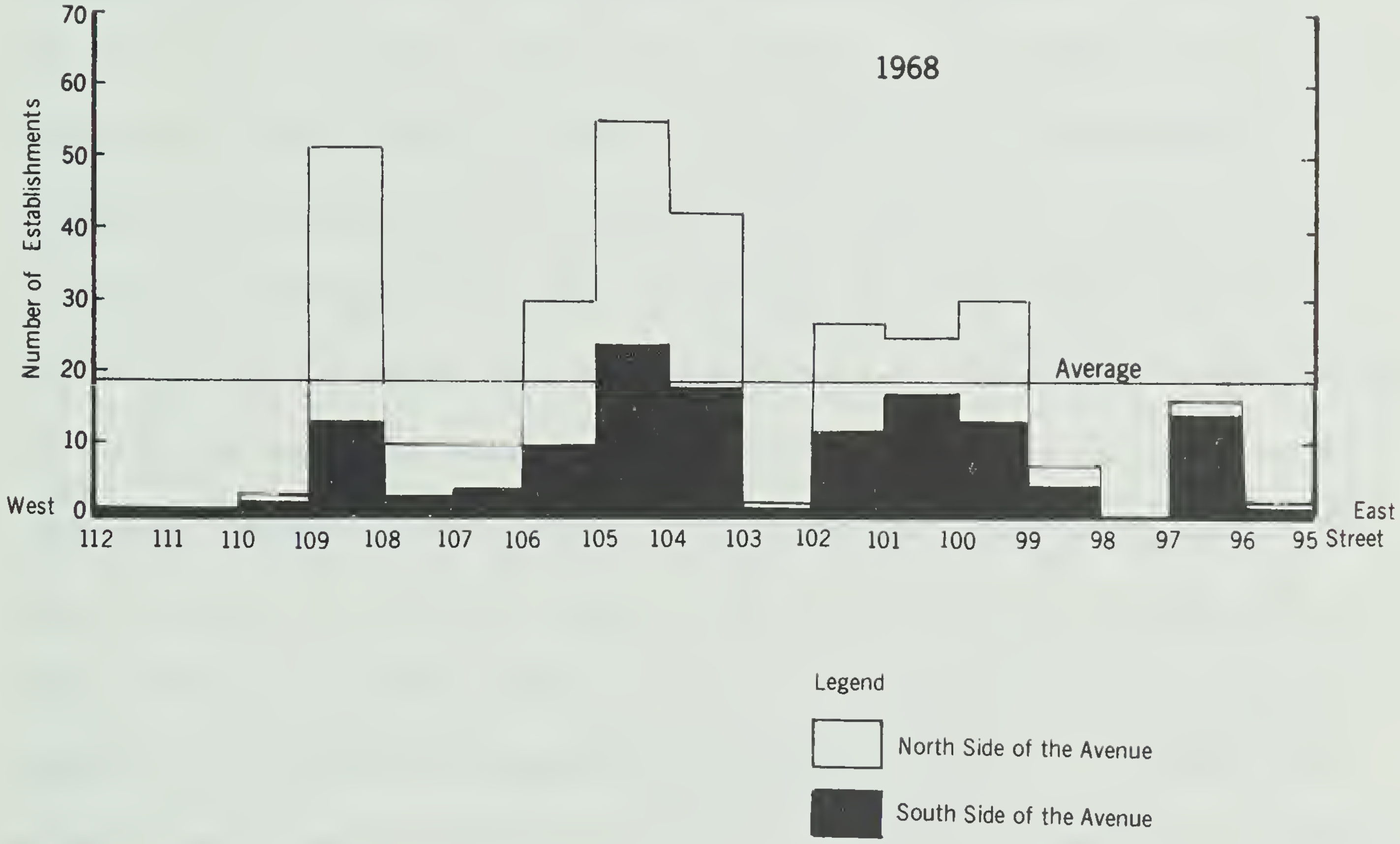


Figure 13g


1968
Number of Establishments
70
60
50
40
30
20
10
0
West
East
Average
112
111
110
109
108
107
106
105
104
103
102
101
100
99
98
97
96
95
Street
Legend
North Side of the Avenue
South Side of the Avenue

South Edmonton. Prior to the amalgamation of the two cities, this centre was the principal shopping centre of the Strathcona settlement. After the amalgamation, it still retained its importance as the major shopping district south of the river. Figure 7 illustrates some of the characteristics of the commercial structure of Whyte Avenue in 1914.

The prime retail shopping area in South Edmonton was concentrated on a few blocks at the main axis formed by the intersection of the two major thoroughfares of the city, Whyte Avenue, which was the principal east-west cross-town arterial route, and 104th Street, which formed the major north-south highway leading to Calgary. Figure 3, which portrays the major land use of the city, highlights the central location of this shopping centre. Its proximity to the downtown of Edmonton, the University of Alberta, the railway facilities, and the principal residential area led to a commercial development that was unrivalled in any other part of South Edmonton. By 1914, the commercial core centred on Whyte Avenue was well-established. The tallest buildings were located at this point. Its commercial importance can be demonstrated by the fact that about 74 per cent of the total business establishments in South Edmonton were located within the Whyte Avenue commercial development (Henderson's Directory, 1914). The remaining establishments were scattered throughout the area in the form of neighbourhood stores. A large proportion of these neighbourhood stores were corner grocery stores serving the immediate needs of the local residents.

The early commercial nucleus showed a tendency towards lineal development. Figure 2 displays the linear form of the commercial core in 1914. This lineal development was greatly strengthened by the construction of the street-car route along this section of the street

(Figure 3 and 15). This was the major form of mass transportation before the popular use of automobiles in the 1950's. Figure 7 provides a finer break-down of each of the major business types into sub-categories. It should be noted that the distribution of business types has been shown on a half-block basis[1]. This is because of the fact that, except for a very small number of retail outlets later developed on some of the major intersections, the area immediately to the north and south of the development was found to be mostly residential in nature with the exception of the industrial development adjacent to the railway yards (Figure 3).

The general commercial structure of the ribbon, as shown by Figure 7, contains a variety of facilities. The importance of each kind of business type was determined on the basis of the number of establishments present in a given group. The percentage was calculated for each major group and the cumulative percentage was also shown. The physical size in terms of floor space can used to measure the relative importance of each business type. However, this was not attempted because of the time limit and the difficulties of getting former building plans. The method employed was deemed to be satisfactory for this aspect of the study.

In 1914, a total number of 170 service and retail establishments were found on Whyte Avenue or 82nd Avenue.[2] These are presented in both

1 A block, as used in this study, is defined as the area on one side of the street, and which is located between two successive cross streets.

2 Edmonton adopted the present numerical system of numbering its streets and houses in 1914. However, some streets still retain their old names.

tabular and graphic forms (see Figures 7, 14 and Table 1). It is noteworthy that relatively fêw business types account for a large portion of the total number of restablishments.

Consideration is now given to an analysis of the importance of each of the facilities identified, as measured by the number of each kind. Figure 7 shows that service establishments occupied a more important part in the total development (62.9 per cent) than did the retail establishments (37.1 per cent). Within the service category, the personal service group (21.2 per cent) led in the number of establishments, especially eating places, laundries, hotels and shoe repair shops. This group was followed by the finance group (19.4 per cent). Most of these were real estate offices developed in response to the general land boom of 1911-12 as discussed in the historical section. The community group, represented by the medical, recreational and other sub-groups, formed the next major category (11.8 per cent). The food group, which was the most important of the retail class, ranked third (11.8 per cent).

It is also noted that certain kinds of facilities were represented by relatively small numbers of establishments. These are the automobile group (2), the general merchandise (6), the apparel group (7), and the miscellaneous services (5).

The distribution of each of the major groups and sub-groups of the business types is presented in Figure 7. This diagram also shows whether they were located on the north or south side of the street. An examination of Figure 7 illustrates that differences did exist in the spatial distribution of certain kinds of facilities over the entire

Number of Business Establishments on Whyte Avenue 1914-1968.

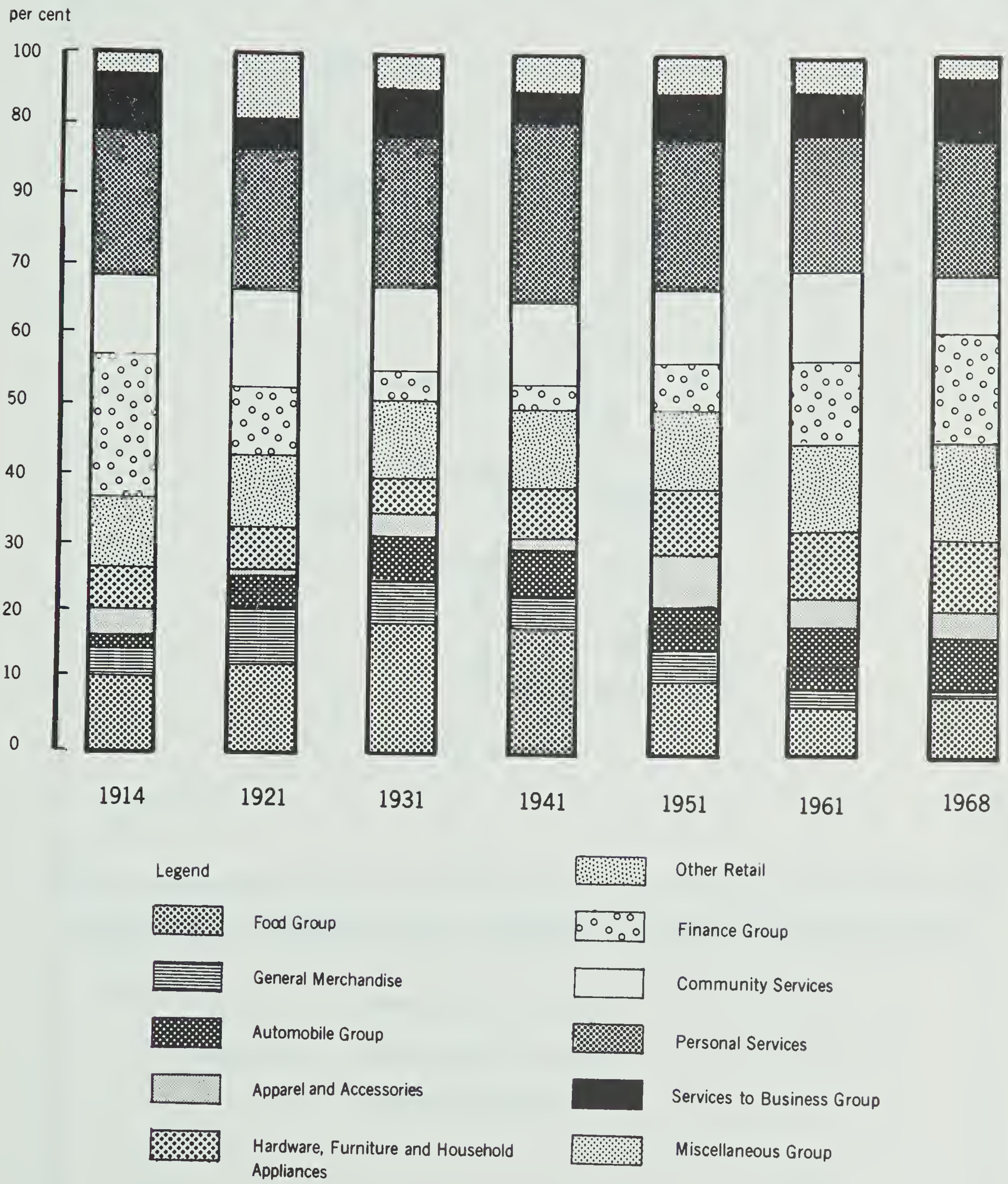


Figure 14

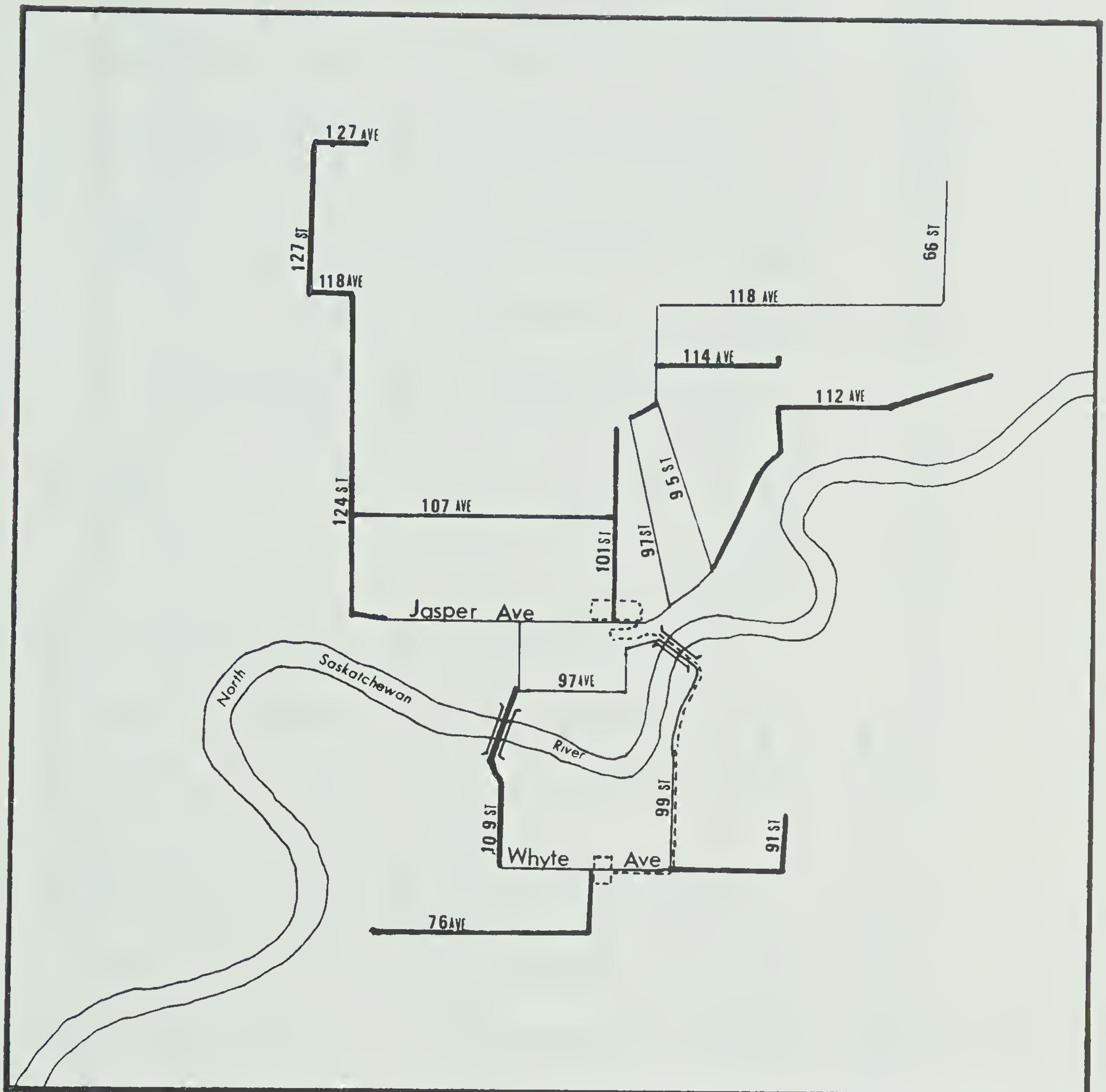


Figure 15: EDMONTON TRANSIT SYSTEM 1908-1939

Legend

- ———— Street-car Routes up to 1910
- ━━━━ Street-car Routes up to 1938
- - - - - - - First Trolley coach Route 1939

Source : Edmonton Transit System

miles 0 1 2

TABLE I - CHANGES IN TYPES OF BUSINESS, 1914 - 1961

Types of Business	1914 No.	1914 %	1914 Cum. %*	1921 No.	1921 %	1921 Cum. %	1931 No.	1931 %	1931 Cum. %	1941 No.	1941 %	1941 Cum. %	1951 No.	1951 %	1951 Cum. %	1961 No.	1961 %	1961 Cum. %
Food Stores	20	11.76	11.76	18	12.86	12.86	31	19.25	19.25	29	18.21	18.21	33	12.41	12.41	27	7.54	7.54
General Merchandise	6	3.53	15.29	11	7.86	20.72	9	5.59	24.84	7	4.37	22.49	8	3.01	15.42	8	2.33	9.77
Automobile Group	2	1.18	16.47	7	5.00	25.72	11	6.83	31.67	12	7.50	29.99	17	6.39	21.81	31	8.66	18.43
Apparel & Accessories	7	4.12	20.59	1	0.71	26.43	5	3.11	34.78	3	1.88	31.87	19	7.14	28.95	15	4.19	22.62
Hardware, Furniture & Appliances	10	5.88	26.47	9	6.43	32.86	8	4.97	39.75	10	6.25	38.12	25	9.40	38.35	34	9.50	32.12
Other Retail Stores	18	10.59	37.06	14	10.00	42.86	17	10.56	50.31	28	11.25	49.37	30	11.28	49.63	44	12.29	44.41
Finance Group	33	19.41	56.47	13	9.28	52.14	8	4.97	55.28	7	4.37	53.74	17	6.39	56.02	43	12.01	56.42
Community Services	20	11.76	68.23	20	14.28	66.42	20	12.42	67.70	18	11.25	64.99	28	10.53	66.55	48	13.41	69.83
Personal Services	36	21.18	89.41	28	20.00	86.42	33	20.50	88.20	41	25.63	90.62	58	21.80	88.35	67	18.72	88.55
Services to Business	13	7.65	97.06	6	4.29	90.71	11	6.83	95.03	6	3.75	94.37	16	6.01	94.36	24	6.70	95.25
Miscellaneous Services	5	2.94	100.00	13	9.29	100.00	8	4.97	100.00	9	5.63	100.00	15	5.64	100.00	17	4.75	100.00
Total	170	100.00		140	100.00		161	100.00		160	100.00		266	100.00		358	100.00	

* Cum. %: Cumulative percentage.

Sources: Henderson's Directories, 1914, 1921, 1931, 1941, 1951 & 1961.

development, as well as in the differential growth of the commercial establishments on different portions of the ribbon.

Generally speaking, there was little difference between the types of businesses found on the north or south side of the ribbon. The main exception to this was the occurance of ten out of the eleven restaurants on the south side of the avenue. In terms of the total number of outlets, the north side of the avenue had a higher density of commercial development (93) than the south side (71). Density of development was not only different on either side of the street, but also on a block-to-block basis. This is shown very clearly in Figure 7 and 13a. It is apparent, blocks forming the intersection of 104th Street and Whyte Avenue had the highest concentration of commercial development with a greater concentration on the north side of the street. The number of commercial establishments developed to the east and west of the main concentration fell very rapidly.

The C.P.R. property in this area tended to bisect the development into two parts. Although the C.P.R. depot and its related railway facilities were acting as a magnet in attracting both the industrial and commercial activities, it formed a barrier to the commercial growth east of the railway tracks. This is because the main street is located west of the track, as is the major proportion of the pedestrian traffic. The tract of land forming the railway right-of-way not only incurries inconvenience to the east-west bound vehicular traffic, but also to the pedestrian traffic. As a result, development on the west of the track was greater than that on the east.

It is readily noted that some of the functions were more evenly

distributed than others. A large proportion of the establishments in the financial group, the general merchandise and the restaurants were concentrated on the blocks lying between 104th and 105th Streets. The location of the northern terminus of the C.P.R. depot had clearly stimulated development such as hotels, restaurants, and real estate activities which afforded convenience to the new arrivals before they proceeded from here to the north or other parts of the city. The Strathcona Hotel, with its prime location, served not only as the medern hotel on the south side of Edmonton, but also performed some other social functions. It was "...the heart of the community. Here gathered remittance men and farmers from Clover Bar. Here Colonel Jarvis (R.N.W.M.P.) administered justice" (Hawe, et al., 1951).

Professional offices, which included offices for barristers, accountants, contractors, architects and physicians, were located in the same area above the retail stores. The main concentration of the professional offices was found on the north side of the avenue as there were more office buildings than on the south side.

Within the general merchandise group, there were a few relatively large general stores which catered not only to the needs of the local residents, but also to immigrants who proceeded mainly to the farming population in the surrounding districts. The major general stores usually occupied the corner lots. By this time some of the general stores were in the transition from the general to the department stores. For instance, one of the oldest stores in the city, the Douglas Brothers Company, had begun to experiment with the system of departmental selling. The MacDonalds Limited Store, which occupied a corner lot on Whyte

Avenue, performed the functions of both a general store and a wholesaling outlet.

Grocery stores and meat markets in the food group were distributed quite uniformly throughout the development. Personal service and retail establishments did not show a strong centralization in any particular section of the development.

Such was the commercial structure found in South Edmonton in 1914, with a single core anchored at the main axis of the two major arterial routes of the city. It was the origin and the growth point of the present commercial ribbon. This commercial core was supported, sustained, and further strengthened by the fact that it remained as the southern hub of the major routes leading into and out from the city, and also by the location of the major railway in Canada - the Canadian Pacific Railway. It also was accessible to one of the most populated parts of the city.

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE, 1914-1921

The overall commercial development on Whyte Avenue in 1921 was not much different from that of 1914. There was, however, a decrease of about 18 per cent in the number of establishments (Table II). The city did not regain the population it had in 1914 during the period. Although the recession that followed the war was mild, the number of commercial outlets were sensitive to this economic change with some of the functions dropping from the commercial scene (Table I). It is interesting to note the first signs of commercial development near the junction of 109th Street and Whyte Avenue (Figure 2 and 13b).

TABLE II - PERCENTAGE CHANGES IN THE NUMBER OF ESTABLISHMENTS OF THE MAJOR TYPES OF BUSINESS 1914 - 1961

Types of Business	1914-1921	1921-1931	1931-1941	1941-1951	1951-1961	1914-1961
	%	%	%	%	%	%
Food Group	- 10.00	+ 72.22	- 6.45	+ 13.79	- 18.18	+ 35.00
General Merchandise	+ 83.33	- 18.18	- 22.22	+ 14.28	00.00	+ 33.33
Automobile Group	+250.00	+ 57.14	+ 0.09	+ 41.66	+ 82.35	+1450.00
Apparel & Accessories	- 85.71	+400.00	- 40.00	+533.33	- 21.05	+ 114.28
Hardware, Furniture & Appliances	- 10.00	- 11.11	+ 25.00	+150.00	+ 36.00	+ 240.00
Other Retail Stores	- 22.2	+ 21.42	+ 5.88	+ 66.66	+ 46.66	+ 144.44
Finance Group	- 60.60	- 38.46	- 12.50	+142.85	+152.94	+ 30.30
Community Services	00.00	00.00	- 10.70	+ 55.55	+ 71.42	+ 140.00
Personal Services	- 22.22	+ 17.85	+ 24.24	+ 41.46	+ 15.51	+ 86.11
Services to Business	- 53.84	+ 83.33	- 45.45	+166.66	+ 50.00	+ 84.61
Miscellaneous Services	+160.00	- 38.46	+ 12.50	+ 66.66	+ 13.33	+ 240.00
Total period change	- 17.64	+ 15.00	- 0.62	+ 66.25	+ 74.43	+ 110.00

Sources: Henderson's Directories, 1914, 1921, 1931, 1941, 1951 and 1961.

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE, 1921-1931

From 1921-1931, the number of commercial outlets on Whyte Avenue increased by 15 per cent (Table 1). By this time, the two sub-centres, one located at the intersection of 109th Street and Whyte Avenue, and the other at the intersection of 99th Street and Whyte Avenue had come into existence (Figure 2 and 13c). The main commercial focus located at the main axis of 104th Street and Whyte Avenue, was still the most attractive location for commercial activities (Figure 9). Elsewhere growth was more evenly distributed.

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE, 1931-1941

The city was ard hit by the 1930-31 depression, and failed to recover from this economic crisis until the outbreak of the Second World War. As recorded by MacGregor (1967, p. 234):

> The impact of the economic upset was felt as early as Christmas, 1929. Farm prices had fallen. Unemployment hit the cities, and a growing "scarcity of money", - something ascribed to malign influences - cut purchasing power and paralysed everyone's will. By 1933, thousands in the prairie cities and all farmers in the drought areas of southern Alberta were on relief and the governments of the prairie provinces were broke.

It was also recorded that during 1931, out of a population of 79,197, 14,573 Edmontonians were on direct relief. Out of some 18,000 families in the city, 3,601 were on relief (MacGregor, 1967, pp. 246-47). uilding permits, another indicator of the economic situation of the city, give an idea of the times. From a high of $5,670,000 in 1929, they dropped to $4,301,000 in 1930, and then plunged to a low of $428, 000 in 1933. From there they rose very slowly to reach $865,000 in 1937. In 1939, the city had emerged from the general depression with

a population of slightly over 90,000. By 1941, the population had crept up to 93,817. The general boom was initiated by the demand for more farm production which led to better conditions in the surrounding districts. In addition, the Royal Canadian Air Force chose Edmonton as one of the centres for their air force trainees. The influx of civilians and military personnel helped to stimulate the general economy of the city.

As a result of the long period of depression experienced in the city, the commercial development along Whyte Avenue in 1941 changed very little. It showed a slight increase of less than one per cent in the total number of establishments when compared to that of 1931 figures. Although the overall total number of establishments remained relatively constant, internal shifts of emphasis did exist. Table II shows that the types of business that suffered most from the depression were the services to business group (-45.5 per cent), the apparel and accessories group (-40.0 per cent), the general merchandise group (-22.2 per cent), the finance group (-12.5 per cent), the community service group (-10.7 per cent), and the food group (-6.5 per cent). These were compensated for by an increase in the hardware, furniture and household appliance group (25.0 per cent), the personal services group (24.2 per cent), the automobile group (9.1 per cent) and the other retail stores group (5.9 per cent).

The commercial structure in 1941 showed a further strengthening of the sub-centres at the two major junctions (Figures 10 and 13d). Another notable feature is the emergence of the sub-centre between 96th and 97th Streets (Figures 10 and 13d). This growth might have been related to the residential development on the east in the Bonnie Doon and

King Edward neighbourhoods, and to the increasing highway traffic which passed through this area on its way to Highway 14.

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE, 1941-1951

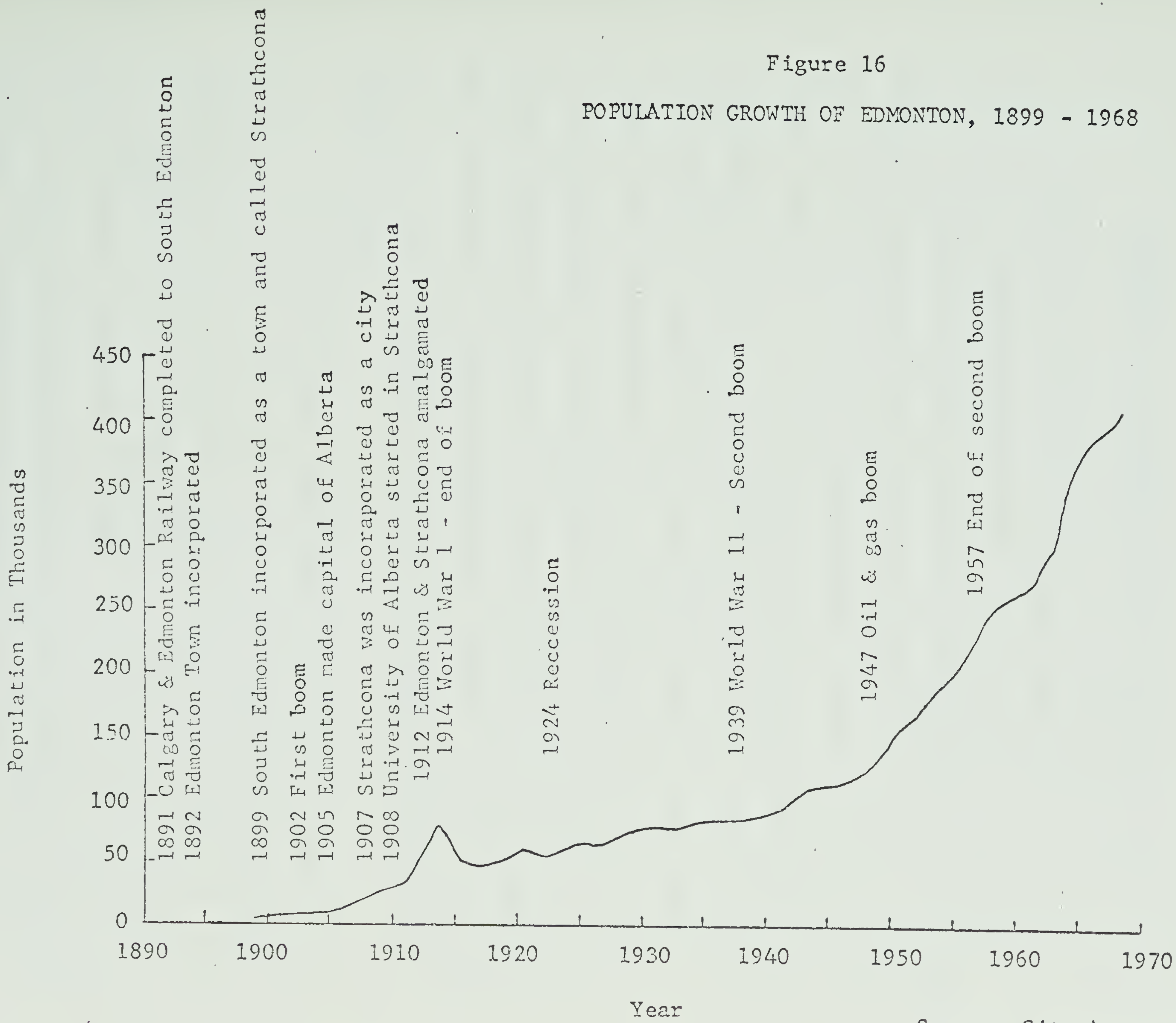
Up to this time, most of the vacant lots on the ribbon were gradually occupied through the process of infiltration and to a lesser extent through the process of replacement of the old residential structures by commercial structures. The total number of establishments had jumped from a total of 160 in 1941 to 266 in 1951, an increase of more than 66 per cent (Table II). It is significant to note that there was an increase in each of the major types of businesses (Table II). The greatest increases were in the apparel and accessories group (533 per cent), the services to business group (166 per cent), and the hardware, furniture and household appliance group (150 per cent).

New development took place along Whyte Avenue with a major concentration at the blocks bounded by 109th and 108th Streets. The subcentre located near 96th Street was further strengthened (Figure 11 and 13e). This period witnessed the major growth of the commercial ribbon.

The striking increase in the number of establishments in this area corresponds to a period of economic boom in the city as a result of the wartime activities. Edmonton's suburbs grew rapidly with population increase (see Appendix D and Figure 16). The pattern of commercial land use in the city had changed little up to this period. The commercial focus in South Edmonton was still centred along Whyte Avenue and the downtown area was north of the river. Whyte Avenue as a major shopping centre up to 1951 is summarized by Bannon (1967, p. 30):

Figure 16

POPULATION GROWTH OF EDMONTON, 1899 - 1968



Source: City Assessors.

> "Planned outlying shopping centres were non-existent and only the strip-commercial activity on 82nd Avenue, the former centre of the Village of Strathcona, offered major competition to the centre area."

COMMERCIAL DEVELOPMENT ON WHYTE AVENUE, 1951-1961

Commercial establishments on Whyte Avenue during the period 1951-1961 increased by 74.4 per cent. The provincial economy, which rested largely on an agricultural base, had been diversified and strengened with the discovery and exploration of petroleum resources. Edmonton profited much from this change becoming the hub of the major oil-fields. Connected with oil development there ensued the growth of the petrochemical industry, using natural gas and certain refinery products as raw materials. Other industries, such as cement, steel, plywood, resins, and building paper manufacturers had been established within the build-up area or on the periphery of the city to serve the oil industry (Marlyn and Lash, 1961, p. 460). Employment in these industries had accelerated the growth of population. Growth in population as well as in the industrial sector contributed to a general increase in commercial activity.

Along Whyte Avenue, finance and insurance offices, banks, and real estate agencies flourished. The finance group had increased by 159.4 per cent from the previous decade (Figure 12 and Table 11), and the services to business group increased by 50.0 per cent. Most of these increases represented the number of establishments engaged in petroleum exploration, pipe-line construction and other forms of construction work. The community group increased by 71.4 per cent. Most of

these are accounted for by the establishment of medical offices. New service facilities were located in a number of office buildings that were built in this period. In the retail category, the most significant increase was in the automobile group, which showed an increase of 82.4 per cent over the previous decade. This was related to the growing popularity of automobile ownership, coupled with the general increase in family income. According to the 1961 census, only 20 per cent of families in Edmonton were without any automobile, while 14 per cent owned two or more. The number of passenger automobiles owned in the Edmonton area increased more than eight times from 1945 to 1961, while the population had more than doubled during the same period. Therefore, the actual rate of automobile ownership increased almost four times (Edmonton District Planning Commission, 1963, p. 41). The growing popularity of automobile ownership was manifested in the establishment of both new and used automobile sales companies and their related activities on the ribbon. It is apparent that by this time, an automobile row had become established on Whyte Avenue. Figure 12 shows that most of these retail outlets were located either east or west of the major commercial nucleus because more vacant land could be obtained. The hardware, furniture, and household appliance group and the other retail group showed a substantial increase of 36 per cent and 46.7 per cent respectively.

In spite of the overall commercial expansion of Whyte Avenue, the number of establishments in the apparel and accessories group and the food group showed a decrease of 21.1 per cent and 18.2 per cent respectively. The general merchandise group remained very stable during

this decade.

Figure 13f portrays the distribution of the number of establishments along the ribbon in 1961. It is apparent that the minor subcentres had grown quite substantially during this period. The most striking development, however, took place on the blocks bounded by 109th and 108th Streets. This formed the major rival to the original centre at 104th Street, offering a comparable variety of functions (Figure 12). The subcentre at 96th Street had also grown quite significantly, although at a much less rapid rate than the centre located at 109th Street.

By this time, most of the vacant lots had been developed. West of 109th Street, development consisted mainly of single-family residential structures. Similar development also took place between 97th and 99th Streets. Residential developments constructed at a later date, usually took the form of apartment buildings rather than single-family houses.

Such was the evolution of the commercial ribbon in this part of Edmonton up to this period. Historical, Geographical and economic forces combined to establish the form of the present structure which extend along Whyte Avenue from 95th to 109th Streets (see Figure 2). The processes discussed in this chapter moulded the location and arrangement of commercial land use. Attention is now focussed on an analysis of the changing functions of the commercial ribbon.

THE CHANGING COMMERCIAL FUNCTIONS OF WHYTE AVENUE, 1914-1961

For a thorough understanding of the changing function of a commercial ribbon development, it is necessary to analyse the commercial

composition through time. This was done through a numerical count and classification of the service and retail outlets as recorded in Henderson's Directories for the selected periods. The results of the tabulation constitute Figures 7 and 12, which provide a detailed break-down of the different types of commercial land uses in each major business type. By comparing these statistics through time, significant changes can be identified. Talbes II and III were calculated from Figures 7 and 12. These tables reveal the business that had undergone both numerical and percentage changes. Table II permits analysis of the differential rates of change within each group, while Table III gives information on the changes in absolute number of each of the major commercial functions through time. Figure 14 and 17 show the differential rate of change among the various groups. Figures 18 and 19 present these changes in graphic form.

To gain an understanding of the changes in the functions of the commercial ribbon, each of the main types of commercial land use will be analysed in turn.

Food Group

In 1914, 11.8 per cent of the establishments found along the shopping street were in the food group, and it reached its peak in 1931 when the percentage rose to 19.3 per cent. Thereafter, it showed a decreasing trend and the percentage dropped to 7.5 in 1961. The total increase in the number of establishments was only 33 per cent for the entire period from 1914 to 1961, one of the smaller contributors to the total growth of the retail and service establishments on Whyte Avenue.

From 1914 to 1961, it appears therefore, that the food group has

TABLE III - CHANGES IN THE NUMBER OF ESTABLISHMENTS BY MAJOR TYPES OF BUSINESS, 1914 - 1961

Types of Business	1914-21	1921-31	1931-41	1941-51	1951-61	1914-61
Food group	- 2	+13	- 2	+ 3	- 6	+ 7
General merchandise	+ 5	- 2	- 2	+ 1	0	+ 2
Automobile group	+ 5	+ 4	+ 1	+ 5	+14	+ 29
Apparel & accessories	- 6	+ 4	- 2	+ 16	- 4	+ 8
Hardware, furniture & household appliances	- 1	- 1	+ 2	+ 15	+ 9	+ 24
Other retail stores	- 4	+ 3	+ 1	+ 12	+14	+ 26
Finance group	-20	- 5	- 1	+ 10	+26	+ 10
Community services	0	0	- 2	+ 10	+20	+ 28
Personal services	- 8	+ 5	+ 8	+ 17	+ 9	+ 31
Services to business	- 7	+ 5	- 5	+ 10	+ 8	+ 11
Miscellaneous services	+ 8	- 5	+ 1	+ 6	+ 2	+ 12
Period changes	-30	+21	1	+106	+92	+188

Source: Henderson's Directories, 1914, 1921, 1931, 1941, 1951 & 1961.

Changes in the Number of
Business Establishments on Whyte Avenue, 1914-1968

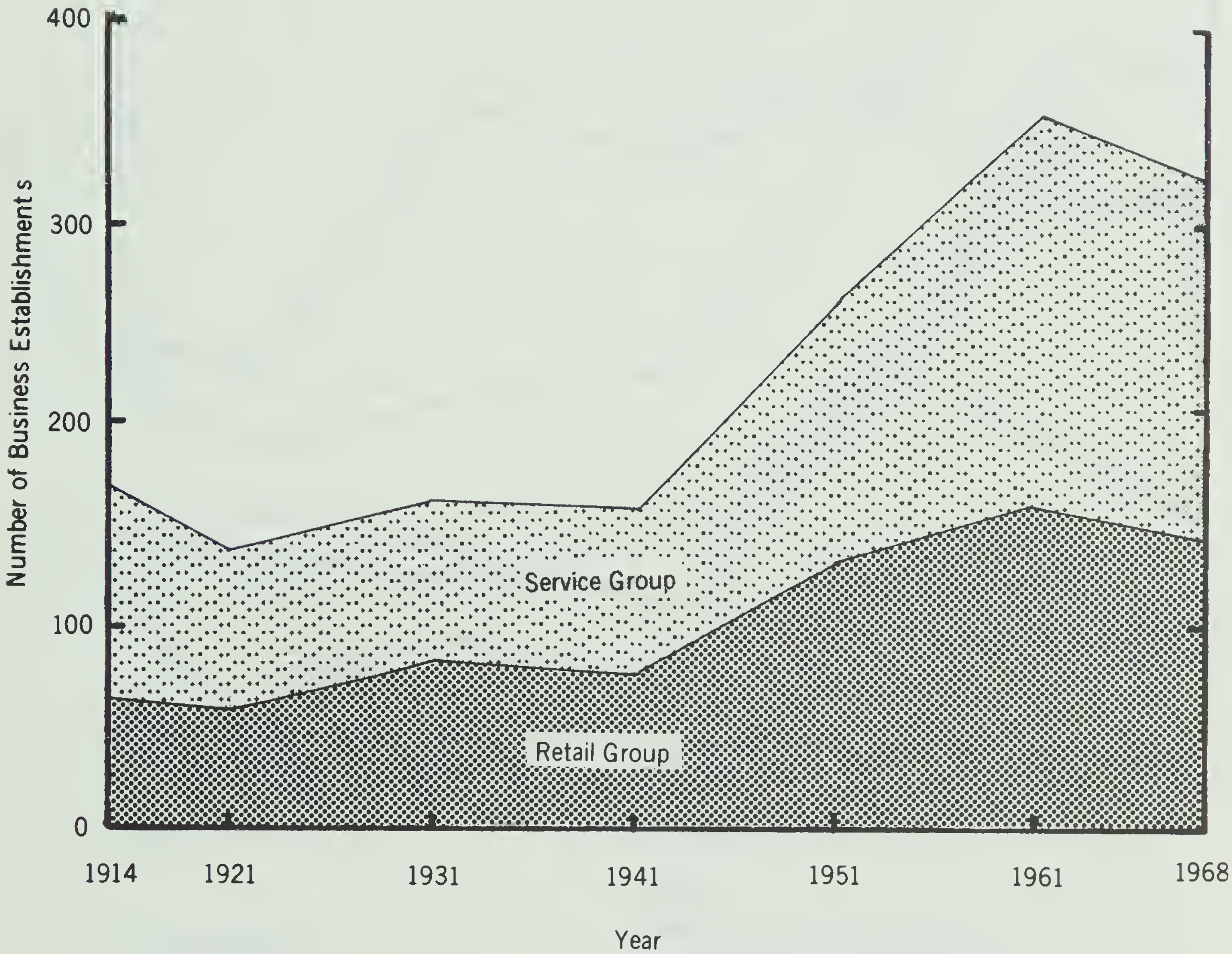


Figure 17

Changes in the Number of Retail Establishments on Whyte Avenue, 1914-1968

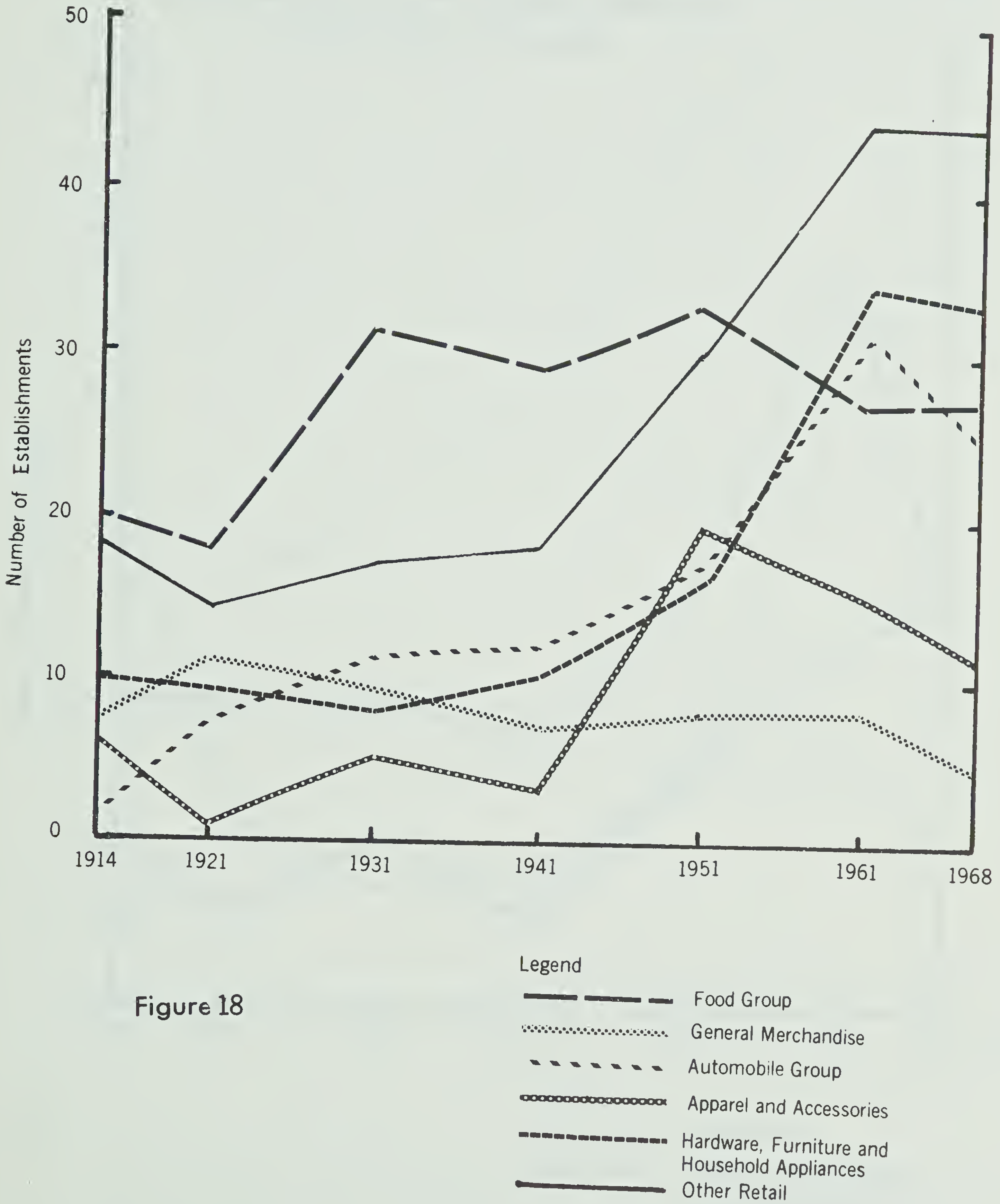


Figure 18

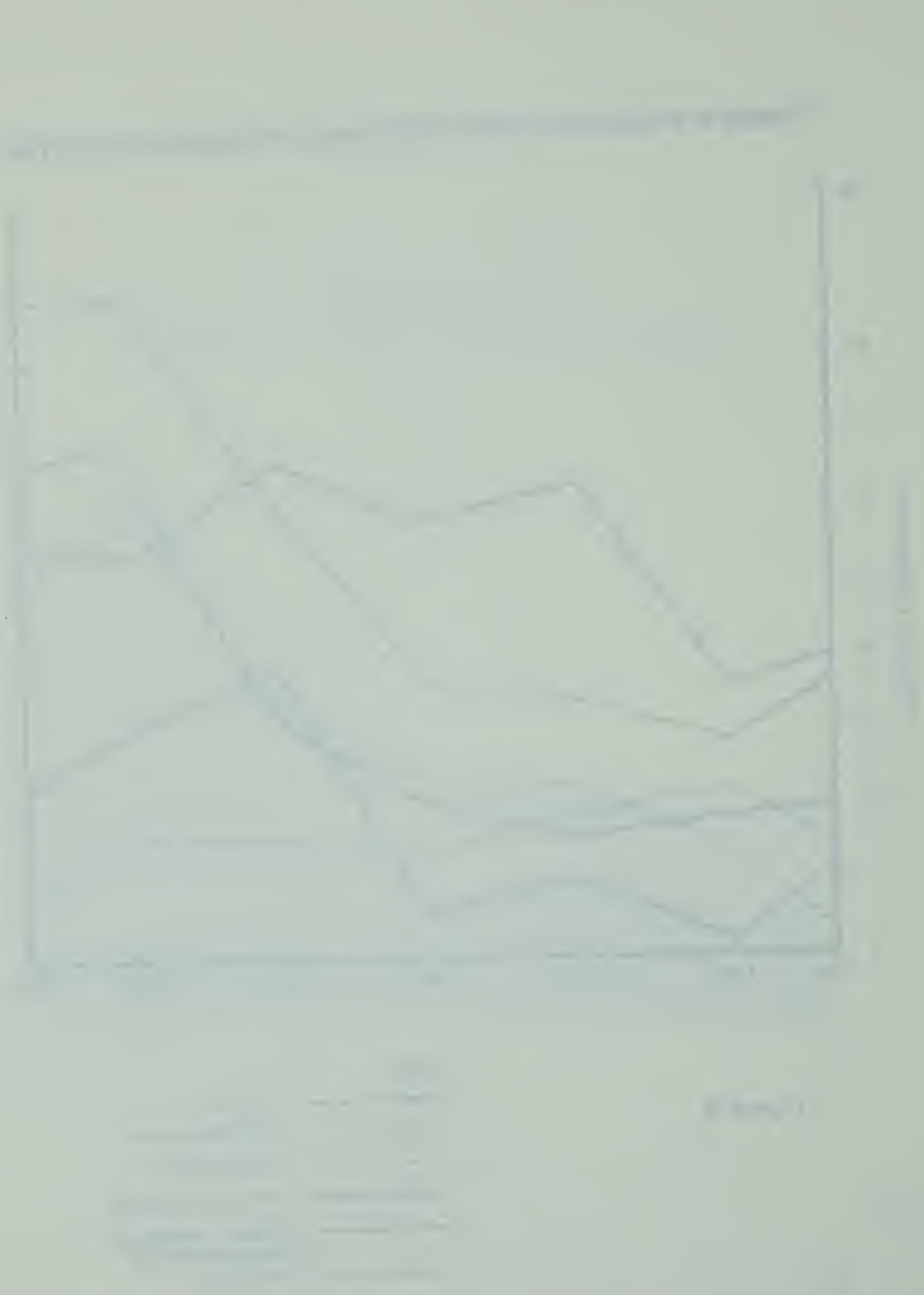
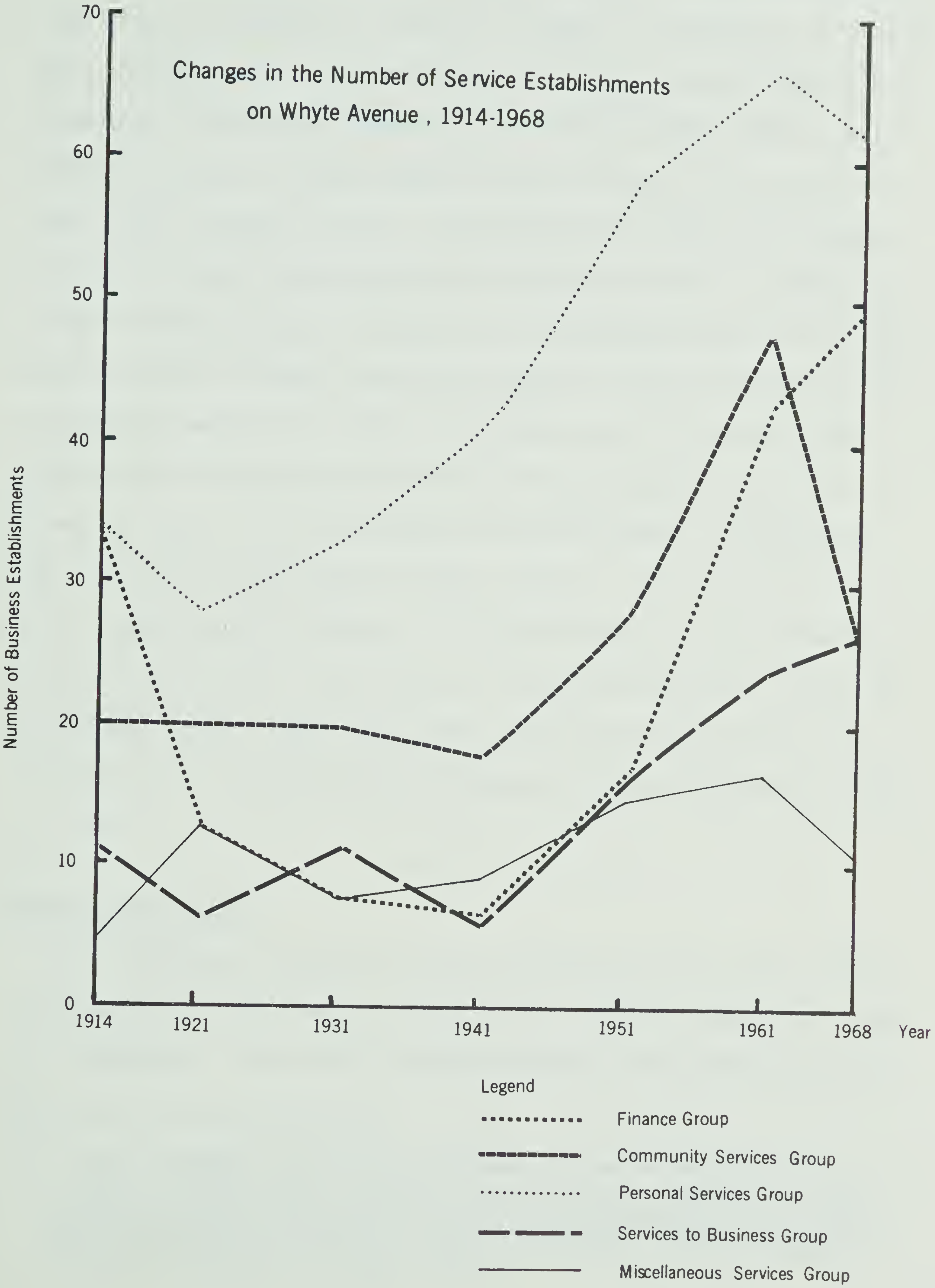


Figure 19



Changes in the Number of Service Establishments on Whyte Avenue, 1914-1968
Number of Business Establishments
70
60
50
40
30
20
10
0
1914
1921
1931
1941
1951
1961
1968
Year
Legend
Finance Group
Community Services Group
Personal Services Group
Services to Business Group
Miscellaneous Services Group

decreased in importance on the commercial ribbon. It could be hypothesized that this decrease is related to changes in the methods of retailing. The appearance of supermarkets has tended to replace some of the economically inefficient "corner grocery" stores (Cook, 1968, p. 98). During the 1950s, a Safeway Supermarket was located at the corner of 109th Street and Whyte Avenue. Supermarkets with ample parking space for their customers have become quite common since 1950. In addition, changing shopping habits, in particular the widespread use of the automobile, helped to promote the establishments of many neighbourhood shopping centres which have tended to draw away many of the grocery and other types of food stores from the traditional shopping districts. In Edmonton, there is a trend towards the establishment of supermarkets not only in the large planned shopping centres, but also within the minor shopping centre complexes. It is envisaged that the expansion of supermarkets and their facilities will reduce the business carried variety stores, small bakery shops, drug stores, and in particular, the isolated grocery stores[2] (City of Edmonton, Planning Department, 1963a, p. 72).

General Merchandise

The general merchandise stores formed one of the least significant groups of retail facilities in terms of absolute numbers and relative importance. The number of establishments in this group remained

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2 It was recorded by the City of Edmonton Planning Department that the number of small grocery stores in the city had reduced by 13 per cent while the total retail sales had increased approximately 200 per cent over a period of ten years (1953-1963) (City of Edmonton, Planning Department, 1963a, p. 92).

fairly constant throughout the entire period of development, although it showed a significant decline in its relative importance. It fell from eight per cent in 1921 to just over two per cent in 1961 in its relative importance among the various groups of commercial facilities. Figure 18 brings out this trend very clearly.

The decline in the relative importance of general merchandise stores within the commercial ribbon development might be an indication that location of such development on a string street is no longer favorable. In spite of the increase in population and family income, there was no corresponding increase in the number of such shops along this street. This might be explained by the fact that general, variety, and other types of stores in this category are partly absorbed by the ever increasing size of department stores. Most of the new general merchandise stores are mainly found in the downtown area where they can benefit from comparative shopping, or in the large planned shopping centres where they can meet the requirements of modern shopping. The largest department store located on this avenue is a discount department store. A "downtown" location for such stores is preferable, but not of absolute importance, as comparative shopping is not imperative.

Automobile Group

The most significant change on the ribbon has been the increasing importance of the automobile group. This group has shown a remarkable increase both numerically and proportionately between 1914 and 1961. During this period, the proportionate increase was 1,450 per cent. Table II shows that the greatest increase took place during the period 1951-1961. In 1961, this group comprised about 7.6 per cent of the

total number of establishments within the commercial development on Whyte Avenue. Most of the increase is explained by the growth of service stations, new and used automobile dealerships, and other automobile related firms. This increase in the number of establishments listed in this group undoubtedly indicates the attractiveness of a commercial ribbon as a prime location for such business operations. Such an explanation was frequently stated on the returned questionnaires from the present automobile retailers. Lineal development on both sides of a major traffic route offers the greatest visibility to potential customers. This factor will be discussed in a greater detail in the analysis of the questionnaires in the next chapter.

Apparel and Accessories Group

Although the number of retail outlets in the apparel and accessories group increased by 114.3 per cent from 1914 to 1961, it showed great fluctuations during the various periods of development. Generally speaking, the number of establishments fell during periods of depression. The number of establishments increased by a total of sixteen during the boom period 1914-1951, and dropped by a total of four during the next decade (1951-1961). Together with the food group, these were the only groups within the retail categories that demonstrated a decline between 1951 and 1961. Nevertheless, this group has never formed a very significant proportion of the total number of establishments, and throughout the entire period (1914-1961), has never occupied more than ten per cent of the total number of establishments. The most significant portion it held was in 1951 when it represented 1.2 per cent of the total. The decreasing importance of this group, might be an indication that the

commercial ribbon has lost its importance as a centre for trading in shopping and specialty goods.

Hardware, Furniture and Household Appliances Group

The hardware, furniture and household appliances group did not become important until after 1914, when the number of establishments within this group increased significantly by 240 per cent. In 1914, it formed only about six per cent of the entire development. This increased to 9.5 per cent in 1961. The increase in the number of retailer dealing in electrical household appliances, paints and hardware may be related to increases in family income and labour costs, and to the fact that there are increasing numbers of housewives working in the labour force. This has greatly increased the need for more and more of the modern labour-saving appliances.

Other Retail Stores

The number of retail outlets in the other retail group has increased significantly from a total of eighteen in 1914 to forth-four in 1961, an increase of 144.5 per cent. There is a high percentage of drug stores within this group. The number of these stores remained rather constant to 1941, but increased subtantially to 1961. The kinds of other retail facilities within this group have increased remarkably throughout the entire period. In 1914, there were only nine different kinds of facilities offered within this group, and this remained much the same up to 1941. In 1951, there were thirteen different kinds of facilities present, with the highest concentration being drug stores and jewellery shops. The kinds of facilities further increased to eigh-

teen in 1961 and the major types were again drug stores and jewellery shops. Other special retail shops, including stationery shops,florists' shops, bicycle, boat and marine supply shops, gift and novelty stores, music stores and optical stores, are all represented in this group. It is significant to note for example that by 1961, newstands and stores selling coal and wood had completely disappeared from the commercial scene. The increase in the commercial facilities within this group greatly enhanced the diversity and complexity of the functional make-up of the commercial ribbon. It should also be noted that, in spite of the increase in both the number and types of facilities within this group, the relative importance of this among the various major groups changed very little during the study period.

Finance Group

The different types of enterprises found in the finance group, such as banks, real estate firms, and insurance and loan companies, showed great fluctuations during the various period of development. This is well demonstrated by the trend in the number of real estate offices found in this group. The large number of real estate offices established during the land boom years of 1911-1912 decreased significantly after the collapse of this boom, and continued to decline in number and relative importance during the ensuing depression years. It did not recover until the next boom period, when the rapid growth of population and construction activity in the city led to an increase in the number of such establishments. By 1961, twelve per cent of the total establishments found on Whyte Avenue were in this group. The location of the branch post-office at the corner of 105th Street and Whyte Avenue has encourag-

ed further development of other financial establishments. It facilitates the pick-up and delivery of mail with great convenience. The residential area abutting this street changed greatly as a result of the expansion of the University of Alberta and the growth of population within the southern part of the city. The quick turnover of the residents, the new residential developments in the surrounding area and increase in residential population of nearby neighbourhood might have stimulated the establishment of a large number of real estate agencies on this heavily travelled street.

Community Services Group

The community services group includes a variety of functions such as medical services, recreational and other community facilities. Here are located some of the most important community facilities in South Edmonton, including the branch post-office, a hospital, churches, motion picture theatres, billiard rooms, bowling alleys and medical clinics. The number of such facilities did not increase significantly until the period 1951-1961. Medical establishments have always formed a very substantial proportion of the number of establishments within this group. This is best explained by the fact that most of the office buildings were located along this street and that this area was accessible to a large portion of the community. Increasing numbers of churches came to be located along this street during the last two decades. The post-office, which was constructed in the early days of settlement, remained as one of the most important community functions within this group. Between 1914 and 1961, the number of establishments found in the community services group increased by 140 per cent, of which the medical offices

accounted for the greatest increase.

Personal Services Group

Throughout the entire period of development, this group of establishments has always held the first position in the number of establishments and the relative importance within the various business types. The rate of increase in this group after 1921 was quite moderate but constant. There was an increase of 86.1 per cent between 1914 and 1961 in the total number of establishments. Proportionately it has shown a downward trend since 1941 (see Figure 14 and Table II), but in absolute number, it has shown a considerable increase. The increase in most cases can be accounted for by the growth in the number of restaurants, laundries, shoe repair and hair dressing shops.

Services to Business Group

The services to business group has demonstrated great fluctuations. This group includes mainly engineering and scientific services, and other professional services rendered by such people as lawyers and accountants. From 1914 to 1961, there was an increase of 84.6 per cent in the number of establishments (Table II). Proportionately this group of businesses has never formed a very significant portion of the commercial structure of Whyte Avenue.

Miscellaneous Services Group

Services that are listed under the miscellaneous group are quite insignificant numerically and proportionately when compared with the other functional groups. They have, however, shown a considerable increase in their number establishments between 1914 and 1961 (Table II).

When these commercial facilities were classified into "retail" and "service" categories, certain changes can be identified under this broad classification. It is apparent from Table I and Figures 14 and 17 that these two main categories changed from period to period. In 1914, the retail group accounted for only 37.1 per cent of the total number of establishments, and it then increased to 42.9 per cent in 1921. The balance came in 1931, when each of the two main functions held an almost exact number of establishments. The relative importance of the retail outlets dropped slightly in 1941. In 1951, the total number increased very significantly. This was followed by an apparent decline to 1961, when retail outlets occupied 44.4 per cent of the total number of establishments. This indicates that in recent years there has been a proportionate decline in the retail function of the commercial ribbon.

CHAPTER II

NATURE AND FUNCTIONS OF THE COMMERCIAL DEVELOPMENT ON WHYTE AVENUE - 1968

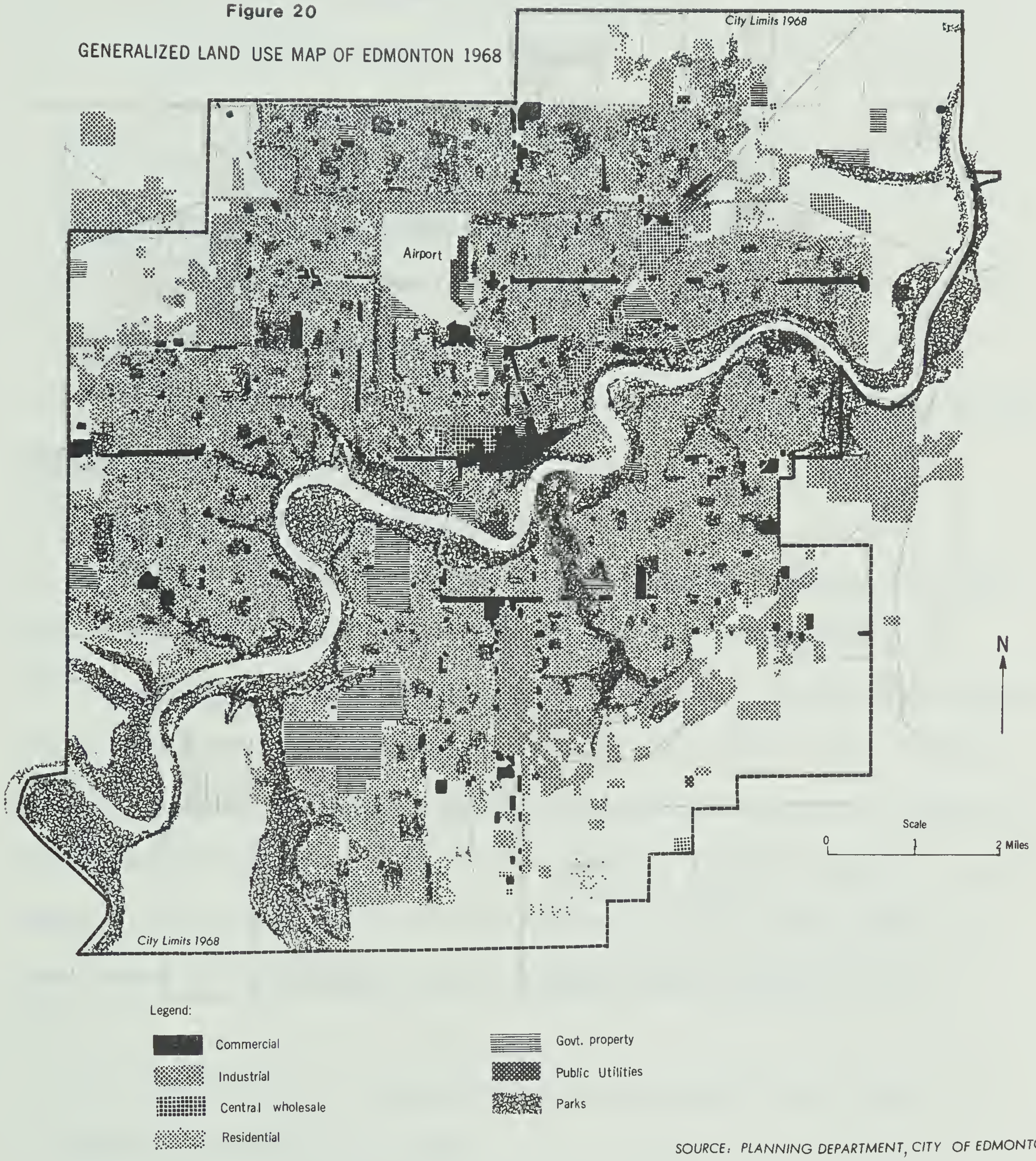
The present chapter focuses on the nature and functions of the commercial development on Whyte Avenue in 1968. It will be organized under four main sections. First, the commercial land use structure of the city is discussed in order to place the commercial development on Whyte Avenue in a citywide perspective. The second section is devoted to an analysis of the changes experienced along the ribbon after 1961. In this section, the nature of the commercial ribbon is discussed in terms of numbers and types of establishments, types of nature, size of establishment, numbers of employees and rental characteristics. Also examined is the spatial distribution of commercial establishments and their density of development in terms of space consumed, and the number of establishments present in the various blocks. The third section focuses on the present functions performed by the ribbon. This is expressed in terms of the areas and customers served by businesses. The last section is a study of the location factors of the establishments in the study area. Data used in this chapter was gathered from the field and questionnaire surveys discussed in the introduction.

COMMERCIAL STRUCTURE OF THE CITY OF EDMONTON IN 1968

Commercial land use in the city forms about five per cent of the total developed area (City of Edmonton, Planning Department, 1967a, p. 52). Figure 20 was prepared with the aim of showing how commercial land uses are distributed and how they are related to other major land

Figure 20

GENERALIZED LAND USE MAP OF EDMONTON 1968



SOURCE: PLANNING DEPARTMENT, CITY OF EDMONTON

uses in the city. The principal components of the commercial structure can be broadly classified into six categories which are considered to be typical in the Edmonton situation.[1] These are:

1) The central business district;

2) Regional shopping centres;

3) District shopping centres;

4) Commercial ribbon;[2]

5) Planned neighbourhood shopping areas;

6) Isolated commercial areas

The principal components of the commercial structure are depicted in Figure 21. The following is a brief discussion of the various types of shopping areas found in the city.

(1) <u>The central business district</u>

Murphy and Vance describe the central business district as that part of the city in which one finds the greatest concentration of offices and retail stores as reflected by the city's highest land values and tallest buildings (Murphy and Vance, 1954, p.189). The central business district as shown in Figure 21 has been delimited by Bannon as that area which is physically and functionally distinct from the rest of the city. This area, with four and one-half million square feet of floor space is " the pinnacle of a complex varied commercial and

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1 This classification is adopted from the one used by the city of Edmonton, Planning Department.

2 The term " retail strip shopping area " was used by the City of Edmonton, Planning Department.

administrative structure " serving not only the city but also a large tributary region (Bannon, 1966, p.122). In contrast to many of the North American cities where downtown areas have suffered a serious decline as the result of commercial decentralization, the CBD of Edmonton still maintains its commercial dominance. It has shown a relative decrease in retail sales, but has retained a strong hold on the retail sales of specialty goods. As noted by Bannon, the CBD has now become the location of retail stores with high rent-paying ability. This has enabled the CBD to maintain its " health and prosperity ".

(2) Regional shopping centres

The regional shopping centres " serve the entire city area and the adjacent communities " (City of Edmonton, Planning Department, 1963a, p. 65). In Edmonton, these types of shopping areas are planned shopping centres.[3] Older regional shopping centres, such as Westmount Shoppers' Park and Bonnie Doon Shopping Centre, are located in older suburban areas, and recent developments occur principally in the newer communities of the city.

These planned shopping centres are situated at the intersections of major arterials, in order to gain a maximum degree of accessibility. In Edmonton, a regional shopping centre normally has a trade area of between 30,000 and 100,000 persons. The site usually covers an area of 20 acres or more, with a floor space of at least 200,000 square feet.

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3 The City Planning Department defines a planned shopping centre as a group of commercial establishments designed, developed, owned and managed as a unit with adequate off-street parking provided on the site. It is related in its location, size and types of stores to the trade area which the unit serves (City of Edmonton, Planning Department, 1967a, pp. 55-56).

The major drawing power of the centre is usually a large department store which offers a wide range of shopping goods. In addition, there is a wide variety of other commercial establishments located in the same shopping complex.

(3) <u>District shopping centres</u>

A typical district shopping centre usually serves three to four neighbourhoods or a trading area of 10,000 to 20,000 persons (City of Edmonton, Planning Department, 1967a, p. 57). It generally occupies an area of three to ten acres with a floor space of 30,000 to 100,000 square feet. The leading tenant in this case is usually a large supermarket or a junior department store. Other commercial establishment may include drug stores, hardware stores, women and men's clothing shops, restaurants, bakery shops, a liquor store, a laundry and beauty and barber shops.

(4) <u>Planned neighbourhood shopping centres</u>

Since 1950, it has been the practice of the City Planning Department of Edmonton in planning neighbourhood units to provide the unit with a community or local shopping centre (Dant, 1954, p. 35). These neighbourhood shopping centres are one of the most important elements in the neighbourhood design and are designed to be used for convenience shopping by the adjacent residents and the passing traffic. They are generally located on the outer periphery of the planned neighbourhood unit. The site area is often less than three acres with a floor area up to 30,000 square feet (City of Edmonton, Planning Department, 1967a, p. 57). The trade area usually encompasses the neighbourhood in which the centre is located, or a trade area ranging from 3,000 to 10,000 persons. Typical components of the neighbourhood shopping centre

include a grocery store, drug store, laundry, beauty and barber shop and a coffee shop. As can be seen from Figure 21, such developments are quite numerous in Edmonton.

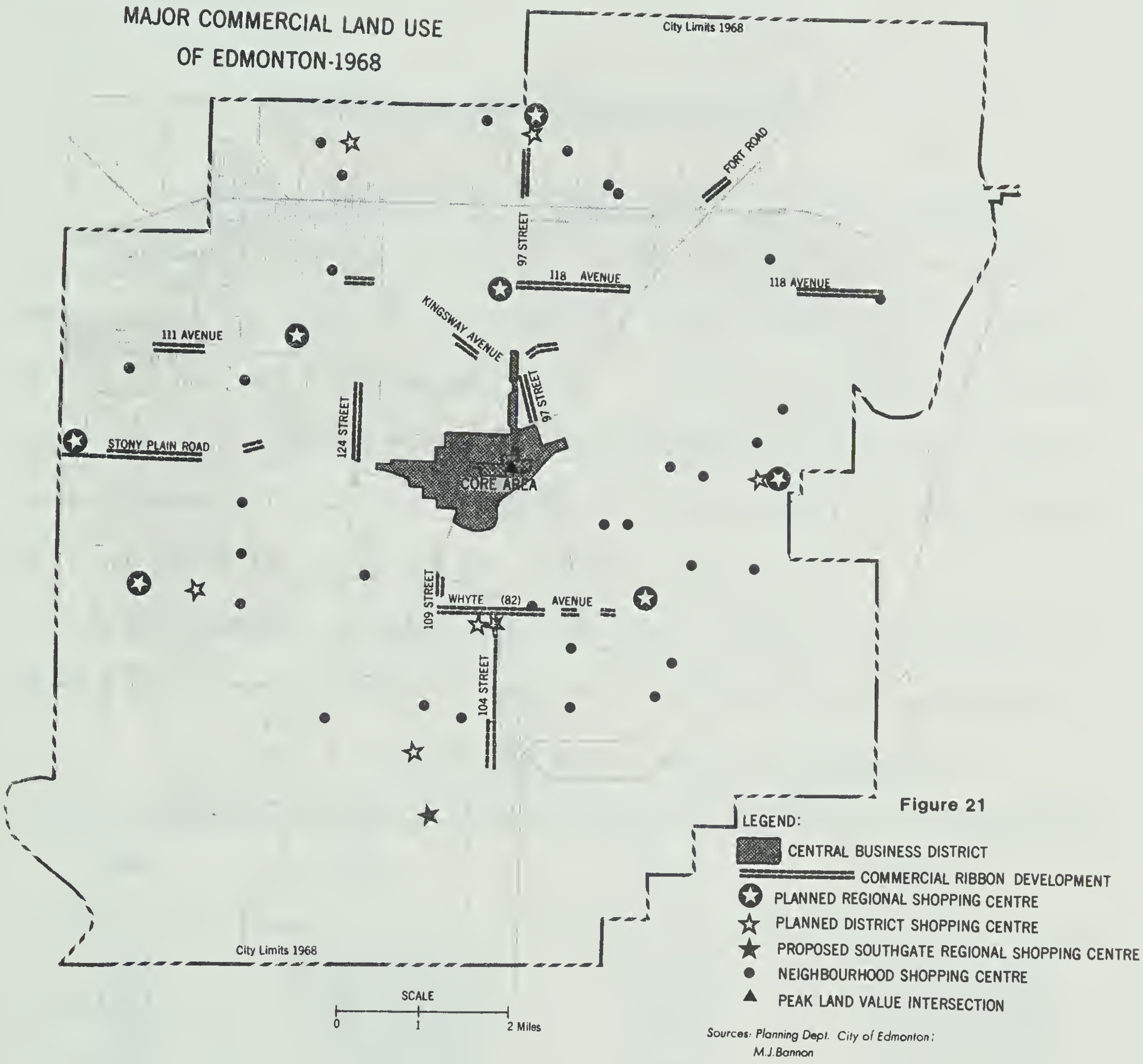
(5) Commercial ribbon development

The older commercial districts of Edmonton often took the form of lineal development on both sides of a major street. Some of these were the outgrowth of early independent community development, catering to the needs of the people in the immediate vicinity. The evolution of the Whyte Avenue commercial district exemplified this type of development. Other similar developments are Stony Plain Road, 118th Avenue and Fort Trail in North Edmonton. A few of these commercial ribbons resulted mainly from the location of street-car lines which passed through the adjacent residential districts. Commercial establishments along 101st Street, 97th Street, 111th Street and 124th Street are of this nature. Such developments were later strengthened by zoning by-laws when the major arterial routes were zoned for commercial land use.

In contrast to the commercial ribbons which are located in the older and inner portions of the city, lineal development which provides services to the travelling public is generally located near the major highways leading to and from the city. Berry describes such development as " highway ribbon arterial development " (Berry, 1963a). Examples in Edmonton are to be found along part of Highway Number 2 and Highway Number 16 West, west of 170th Street.

(6) Isolated commercial areas

Isolated commercial areas are chiefly located in older residential neighbourhood, and take the form of small convenience stores serving nearby residents. Most are grocery stores, restaurants, beauty


MAJOR COMMERCIAL LAND USE
OF EDMONTON-1968
City Limits 1968
FORT ROAD
97 STREET
118 AVENUE
118 AVENUE
KINGSWAY AVENUE
111 AVENUE
97 STREET
124 STREET
STONY PLAIN ROAD
CORE AREA
109 STREET
WHYTE (82) AVENUE
104 STREET
City Limits 1968
SCALE
0
1
2 Miles
Figure 21
LEGEND:
CENTRAL BUSINESS DISTRICT
COMMERCIAL RIBBON DEVELOPMENT
PLANNED REGIONAL SHOPPING CENTRE
PLANNED DISTRICT SHOPPING CENTRE
PROPOSED SOUTHGATE REGIONAL SHOPPING CENTRE
NEIGHBOURHOOD SHOPPING CENTRE
PEAK LAND VALUE INTERSECTION
Sources: Planning Dept. City of Edmonton;
M.J.Bannon

and barber shops and laundries. New methods of merchandising and retailing, together with new modern planning concepts, are gradually eliminating such developments from the commercial scene. However, small stores dealing in special foods for particular ethnic groups have managed to survive.

NATURE OF THE COMMERCIAL RIBBON

Commercial Ribbon Development on Whyte Avenue, 1961-68

Edmonton ranks as one of the fastest growing cities in Canada. Between 1961 and 1968, the population of Edmonton increased by approximately 43 per cent (see Appendix D). In spite of the fact that retail sales during the period have shown a corresponding increase with population increase (Table IV), commercial establishments on Whyte Avenue declined about 10 per cent (see Tables V and VI).

By comparing the 1968 data with that of 1961, it was found that there were several significant changes in certain types of commercial

TABLE IV - ESTIMATED RETAIL SALES FOR EDMONTON

Year	Value	Year	Value
1950	$ 186,000,000	1959	$ 379,000,000
1951	208,829,000	1960	383,000,000
1952	235,000,000	1961	388,237,000
1953	247,000,000	1962	411,000,000
1954	251,000,000	1963	425,000,000
1955	269,000,000	1964	457,000,000
1956	313,000,000	1965	515,000,000
1957	327,000,000	1966	560,000,000
1958	357,000,000	1967	611,000,000

Source: Alberta Bureau of Statistics, 1968

establishments located along the ribbon, although the areal extent of the commercial development did not display any significant change. An examination of the changes which took place in each main function will lead to a better understanding of the recent changes along the commercial ribbon. Figure 22 and Table V display the types of business on Whyte Avenue in 1968, while Table VI demonstrates the overall changes in the number of major types of business establishments for the period of 1961 - 1968.

Food Group

There was practically no change in the number of stores within the food group. However, internal shifts in emphasis in the sub-groups cannot be overlooked. The most noticeable change was a very sharp decline in the number of meat and grocery stores. These types of food stores have been replaced to a large extent by supermarkets. This period was, and still is, one of rapid growth for supermarkets and other food chain stores, as evidenced by the development of both large and medium sized planned shopping centres in the city, where the chief tenant is usually a large supermarket. Modern supermarkets, with their greater assortment of goods, bargain prices for many commodity items, and free parking space for thier customers, render such food stores a much better position than corner-stores. The trend towards bigger stores will make many of the smaller food stores obsolete.

General Merchandise Group

The number of store in the general merchandise group continued to decline numerically and proportionately (Table V and VI). This type of store generally requires a high flow of pedestrain traffic. The study area does not have such an attractive quality. The downtown area and regional centres in the city probably provide a much better

TABLE V - TYPES OF BUSINESS ON WHYTE AVENUE - 1968

Type of Business	Number	Percentage	Cumulative %
Food group	27	8.39	
General merchandise	5	1.55	9.94
Automobile group	25	7.76	17.70
Apparel & accessories	12	3.73	21.43
Hardware, furniture & household appliances	33	10.25	31.68
Other retail stores	44	13.66	45.34
Finance group	49	15.22	60.56
Community services	27	8.39	68.95
Personal services	62	19.25	88.20
Services to business	27	8.39	96.59
Miscellaneous services	11	3.41	100.00
Total	322	100.00	

Sources: Henderson's Directory, 1967; Field work, 1968.

TABLE VI - CHANGES IN THE NUMBER OF ESTABLISHMENTS BY MAJOR TYPES OF BUSINESS 1961 - 1968

Type of business	Number of establishments	Percentage
Food groups	0	0
General merchandise	-3	-37.50
Automobile group	-6	-19.35
Apparel & accessories	-3	-20.00
Hardware, furniture & household appliances	-1	- 2.94
Other retail stores	0	0
Finance group	-6	+13.95
Community services	-21	-43.75
Personal services	-5	- 7.46
Services to business	+3	+12.50
Miscellaneous services	-6	-35.29
Total period change	-36	-10.05%

Sources: Henderson's Directories, 1961 & 1967; Field work, 1968.

location for such stores. This is evidenced by the opening of many of these types of stores in the planned regional centres. The fact that large branch department stores also accompany the development of new regional shopping centres, tends to draw away many of the potential customers from the existing, older shopping areas.

Automobile Group

The number of establishments in the automobile group decreased from 31 to 25, a decrease of about 19 per cent. This was due to a decline in the number of used car dealers. The decline in number of establishments within this group cannot, however, be interpreted as a decline of this group, as many of the small used car dealers were absorbed by the large automobile establishments. An examination of the property transaction records in the assessment department showed that a number of automobile dealers greatly expanded their selling space during the last ten years.[4] The most aggressive dealers in the automobile group have expanded their lines of operation from the selling of new and used cars, along with the operation of a gasoline service station, to the business of car repair and maintenance, and sales of automobile parts and accessories. Hardware, sporting goods, and even food items are being displayed in some of the service stations.

Apparel and Accessories Group

There were fewer establishments in the apparel and accessories group located along the ribbon. The decline in the general merchandise and the clothing groups may be an indication that older commercial rib-

[4] Examination of the land assessment records was carried out during the summer of 1968 in the City Assessors Department.

bons no longer provide a favourable location for the sale of this type of shopping good.

Hardware, Furniture and Household Appliances

In the hardware, furniture and household appliance group, the number of outlets remained relatively stable. In 1968, it still occupied a very significant proportion in terms of the numbers of establishments located on the ribbon. Lower rent in comparison with that paid in the downtown area and many of the planned shopping centres probably encourages a number of such stores to be located along the ribbon.

Other Retail Stores

No change was registered in the number of establishments found in the other retail stores group. Changes, however, occurred in the variety of stores found in this group. A greater variety of stores has developed on this ribbon since 1961. These include gift and novelty shops, sporting goods stores, florists' shops and music stores.

Finance Group

There was an increase of about fourteen per cent in the number of establishments found in this group. By far the greatest increase was accounted for by finance and loan companies, insurance and other investment companies. The number of real estate agents, however, still predominates in this group. The number of banks, though, showed a slight decrease.

Community Services Group

The community services group experienced the greatest loss, both numerically and proportionately. The loss was primarily a result of the decrease of the number of medical offices found within this group. The construction of many new medical buildings and clinics in Edmonton

has rendered many of the older offices functionally obsolete. Other community facilities, such as theatres, churches, post-office, billiard rooms and bowling alleys, remained numerically constant.

Personal Services Group

Numerically and proportionately, the personal services group demonstrated a slight decline during this period. This decrease can be mainly attributed to the decline of shoe repair shops and eating places. This loss was compensated for in part by an increase in the number of beauty and barber shops. New services, catering mainly to automobile customers have been added to the ribbon. Drive-in restaurants and car washing firms are notable examples.

Services to Business Group

Services to business showed small increase, from a total of 24 to 27 between 1961 and 1968. There were no significant changes in the various types of services found within this group.

Miscellaneous Services Group

The number of establishments in the miscellaneous services group suffered a decline from 17 in 1961 to eleven in 1968, a decrease of 30 per cent. This group, however, never did form substantial proportion of the various types of business establishments on the ribbon.

All changes since 1961 are summarized in Table VI. More than one-half of the major types of businesses declined in the number of establishments. A slight increase was experienced by the finance group and services to business group. The food and other retail group remained constant.

New functions, catering mainly to automobile users, such as drive-in restaurants and car-washing firms, are found on the ribbon. The commercial ribbon is becoming more important for the location of automobile-related establishments, as evidenced by the expansion of

many firms both in terms of space occupied and items of services and commodities offered. It is also notable that with the continuous decline of the general merchandise and the apparel and accessories group, the relative importance of the commercial ribbon as a centre for the fashion and style shopping goods has lessened.

Types of Business

For a better understanding of the composition of the ribbon, Figure 22 and Table V were prepared. The types of functions and their relative importance in terms of number of establishments found in each major group are presented. The relative importance of each major business type can also be expressed in terms of the amount of space consumed. Data on the physical size of the establishment was obtained from the property assessment cards which record the size of each individual building. Land assessment records were examined in order to determine the size of each individual lot. Data on the selling space of each business establishment was acquired and checked by an examination of business assessment records. Thus, the total amount of space devoted to each major business type can be calculated and its relative importance determined.

Three hundred and twenty-two business establishments were recorded during the field survey of 1968. When classified using the Standard Industrial Classification Manual with some modifications, this total represented eleven major groups covering seventy-one kinds of retail and service facilities. The importance of each major group and sub-group is illustrated in Tables V and VII and Figures 22-25.

It can be seen from Figure 22 and 23 that only a few types of commercial facilities were dominated by a large number of establishments. Only five facilities were represented by more than ten establishments:

DISTRIBUTION OF BUSINESS TYPES ON WHYTE AVENUE 1968

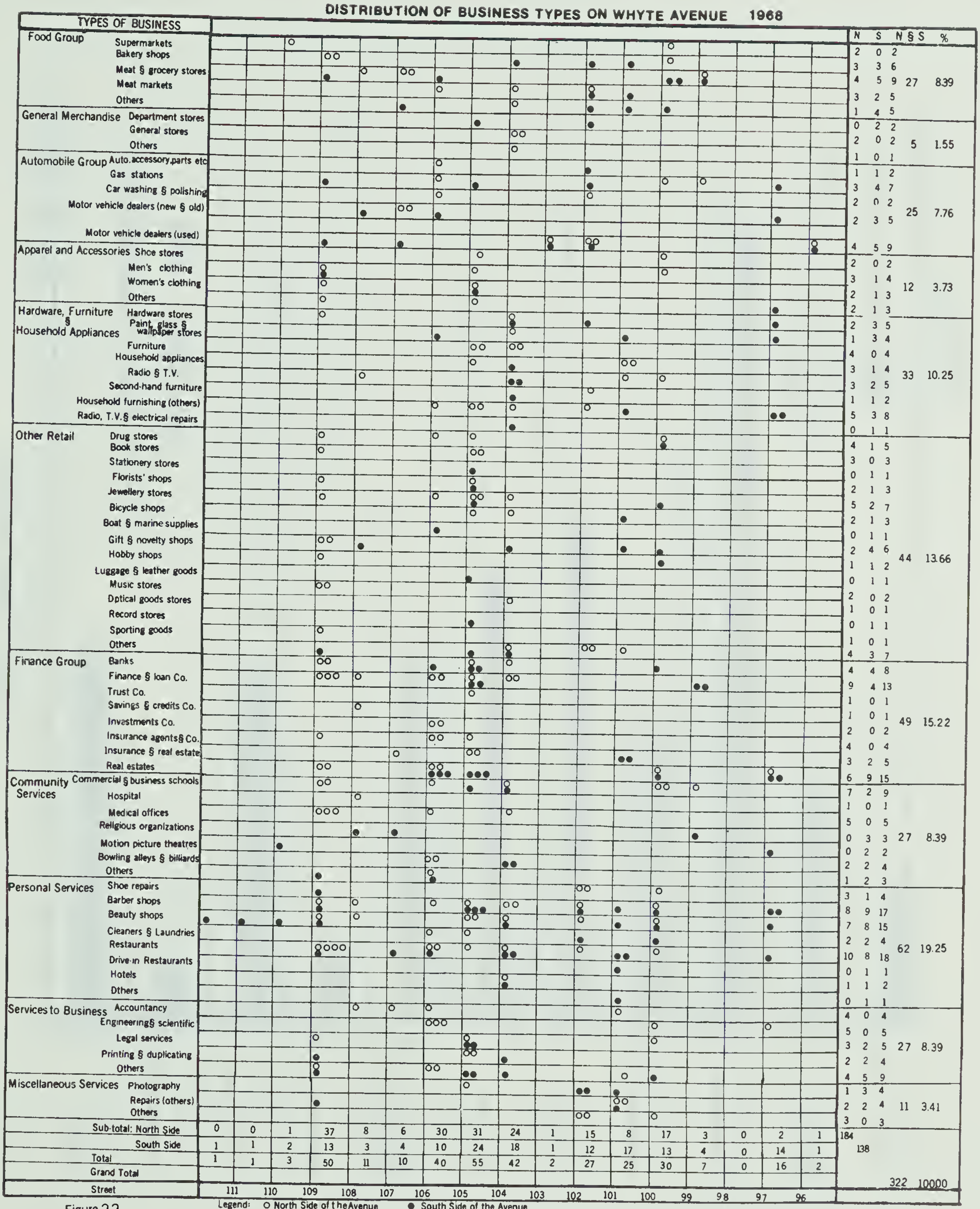


Figure 22

SOURCES: HENDERSON'S EDMONTON DIRECTORY, 1967; 1968 FIELD WORK

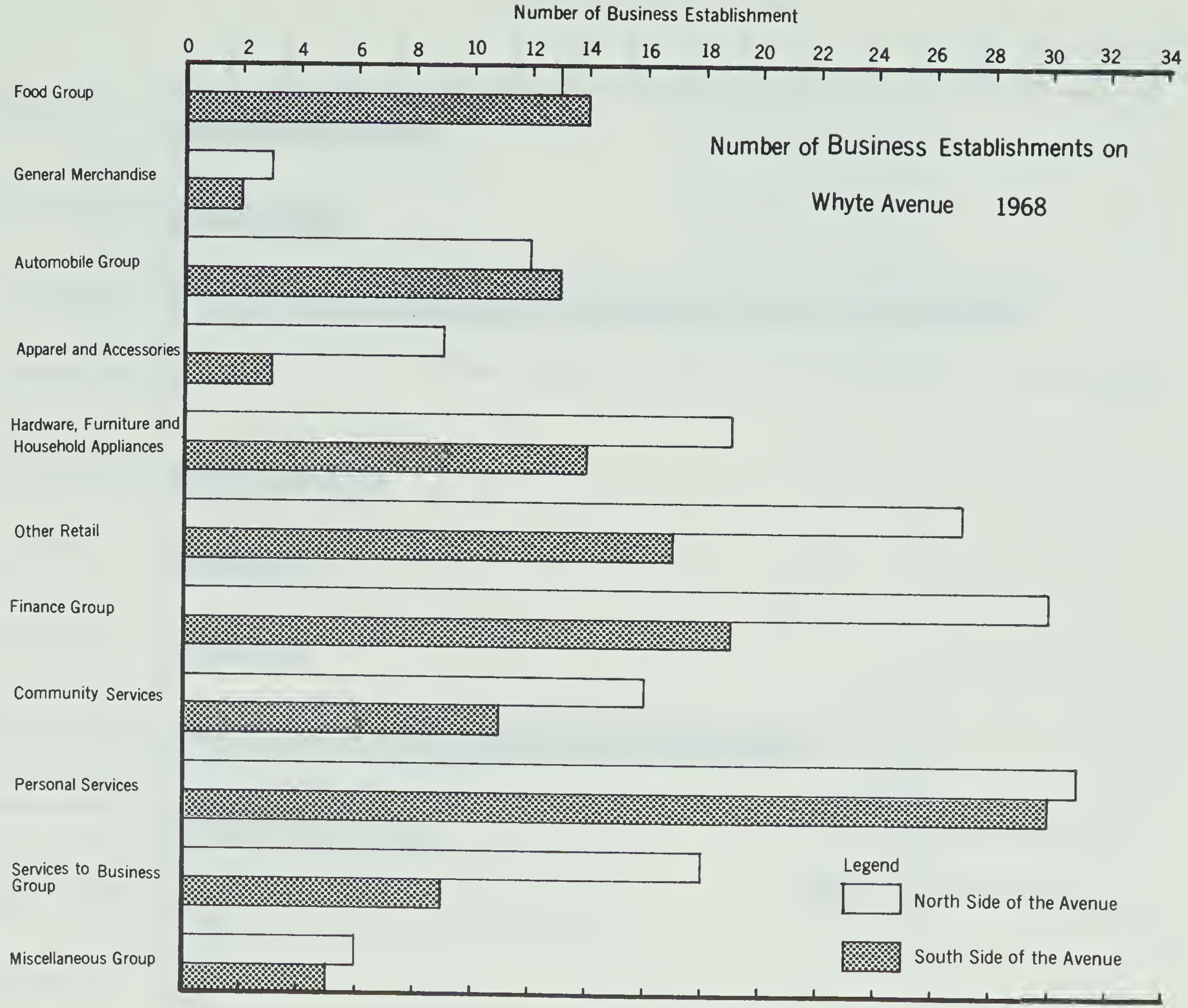
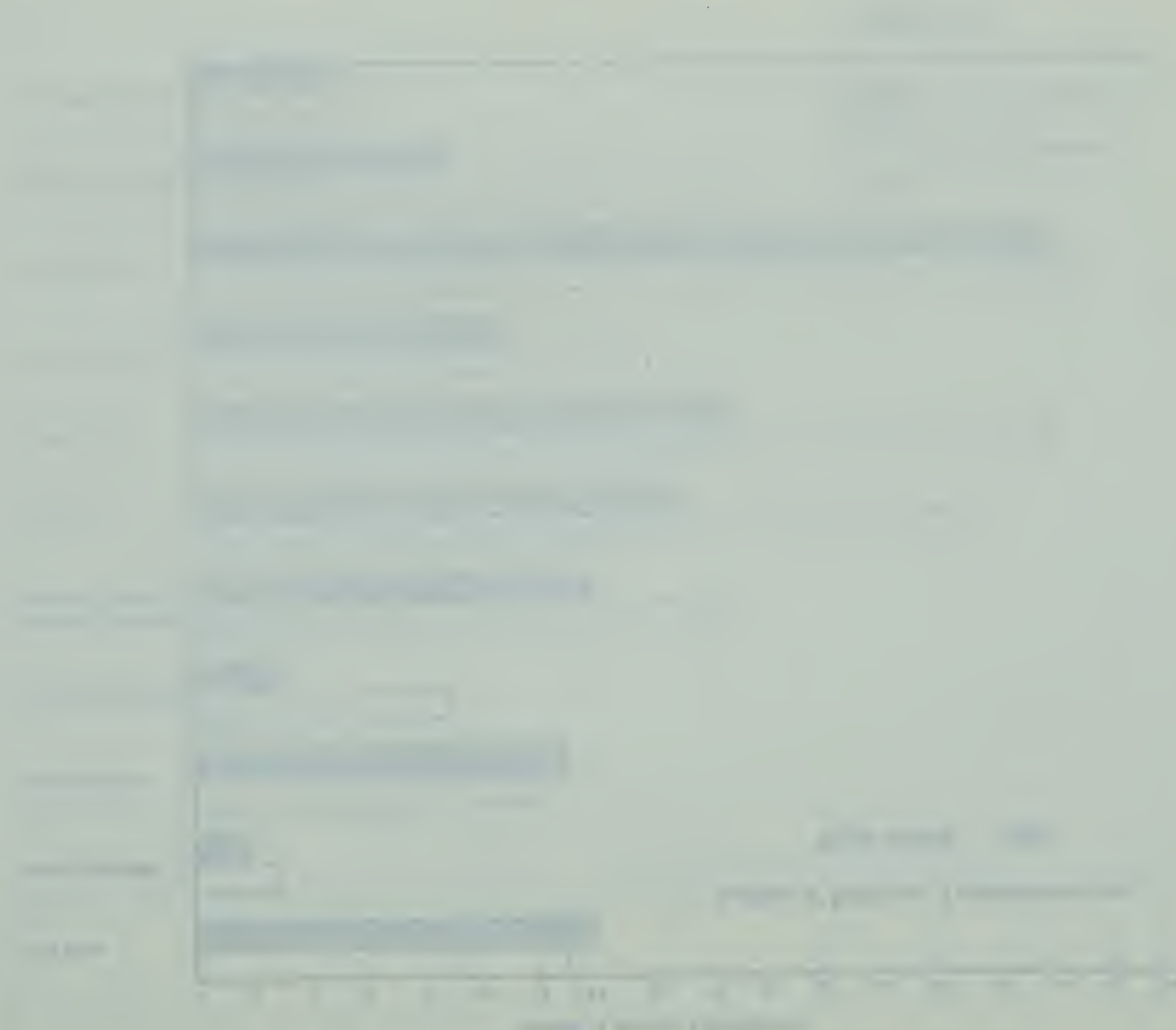
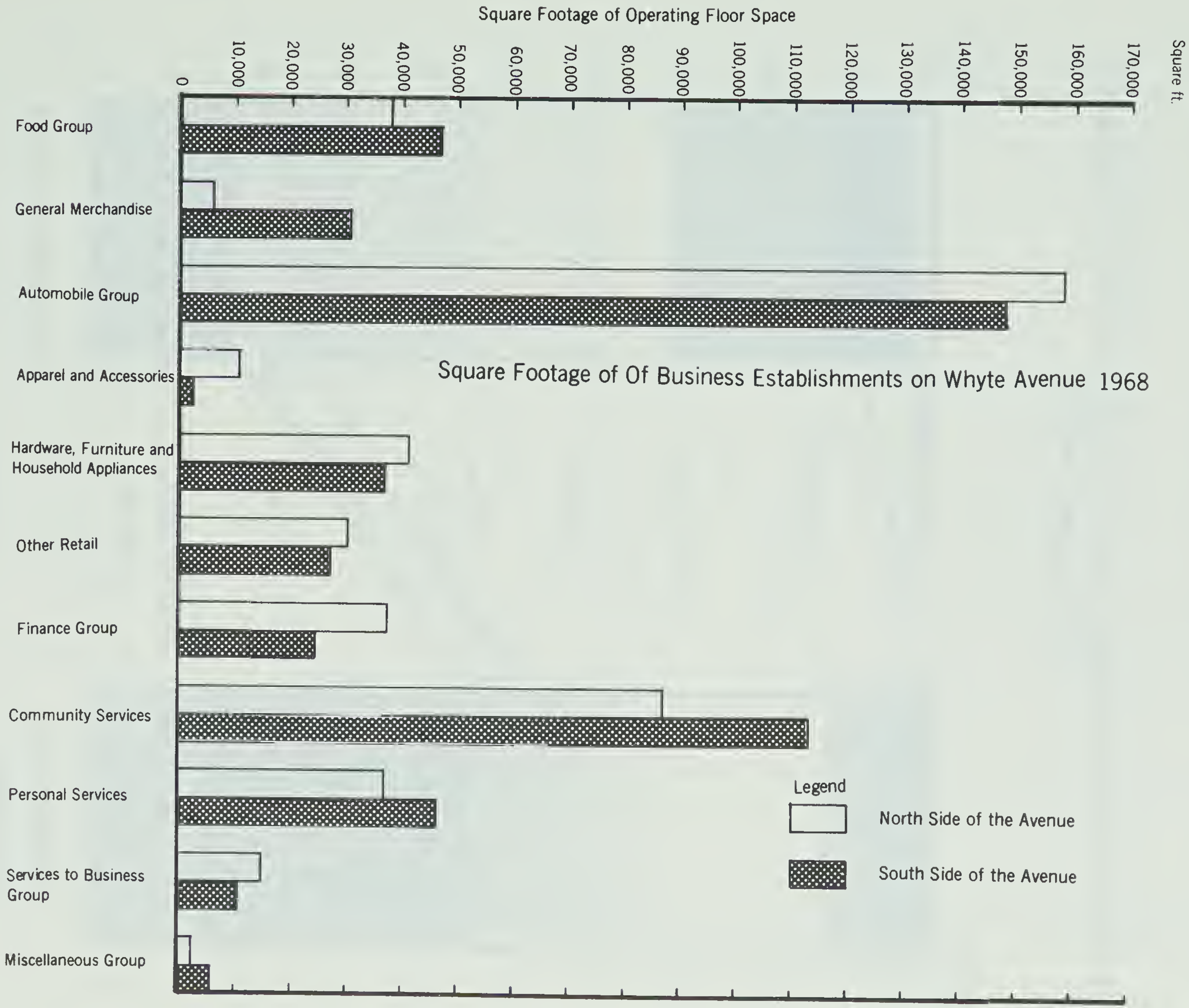

Number of Business Establishment
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
Food Group
General Merchandise
Automobile Group
Apparel and Accessories
Hardware, Furniture and Household Appliances
Other Retail
Finance Group
Community Services
Personal Services
Services to Business Group
Miscellaneous Group
Number of Business Establishments on
Whyte Avenue 1968
Legend
North Side of the Avenue
South Side of the Avenue

Figure 23





Square Footage of Operating Floor Space
Square ft.
0
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
100,000
110,000
120,000
130,000
140,000
150,000
160,000
170,000
Food Group
General Merchandise
Automobile Group
Apparel and Accessories
Hardware, Furniture and Household Appliances
Other Retail
Finance Group
Community Services
Personal Services
Services to Business Group
Miscellaneous Group
Square Footage of Of Business Establishments on Whyte Avenue 1968
Legend
North Side of the Avenue
South Side of the Avenue

Figure 24

Comparative Number and Square Footage of Business Establishments on Whyte Avenue, 1968

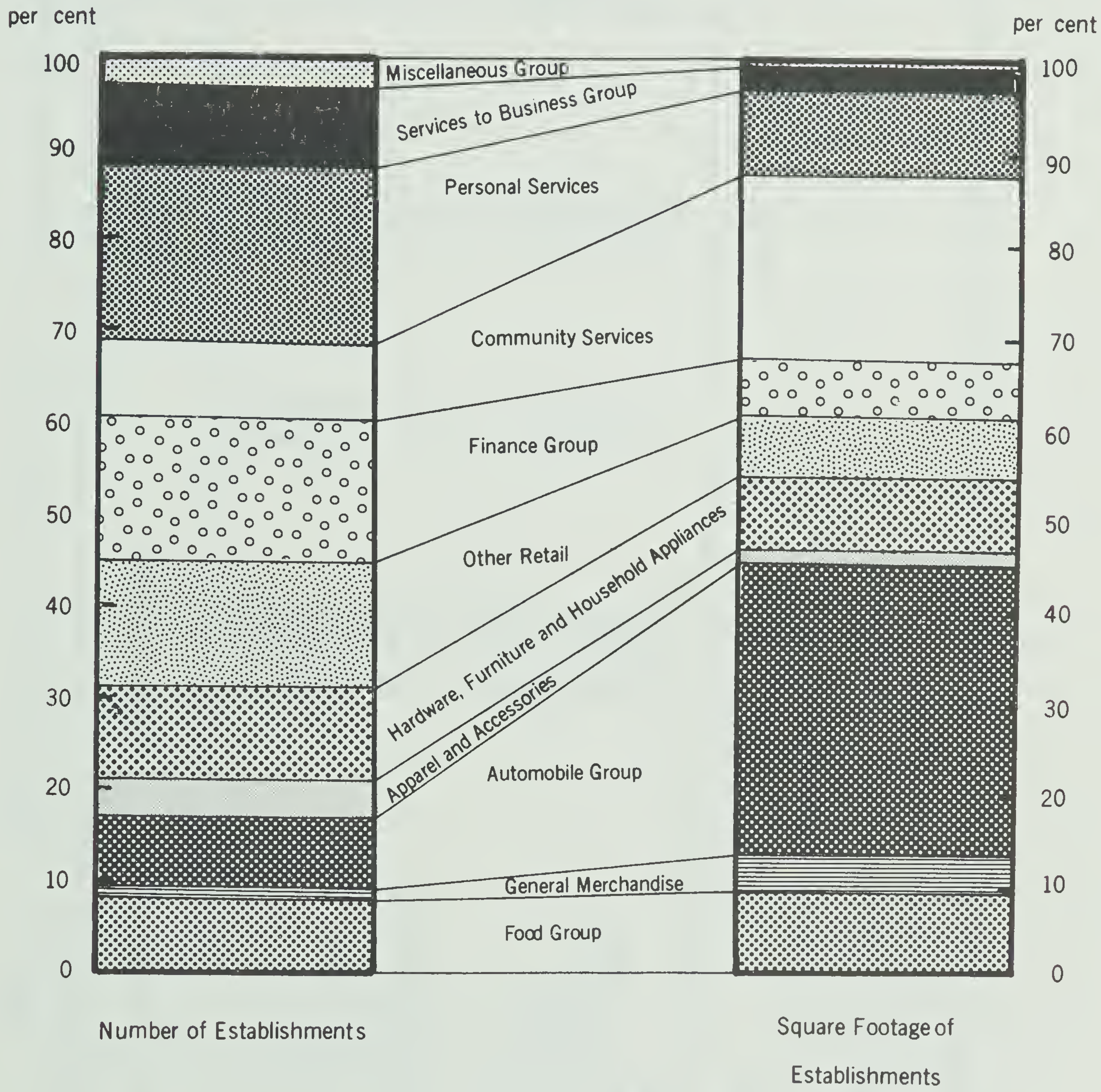


Figure 25

TABLE VII - SQUARE FOOTAGE OF BUSINESS TYPES BY MAJOR GROUPS ON WHYTE AVENUE , 1968

Type of Business	Square Footage	Percentage		Cumulative Percentage	
Food group	85,272	8.93 *	8.36		
General Merchandise	36,456	3.82	3.58	12.75 *	11.94
Automobile group	306,934	32.15	30.11	44.90	42.05
Apparel & accessories	13,012	1.36	1.28	46.26	43.33
Hardware, furniture & household appliances	77,847	8.15	7.64	54.41	50.97
Other retail stores	57,633	6.04	5.65	60.45	56.62
Finance group	60,518	6.34	5.94	66.79	62.56
Community services	200,418	20.99	19.66	87.78	82.22
Personal services	83,333	8.73	8.17	96.51	90.39
Services to business	25,147	2.64	2.46	99.15	92.85
Miscellaneous services	8,085	0.85	0.79	100.00	93.64
Vacant space	64,829	-	6.36	-	100.00
Total	1,019,484	100.00	100.00		

* Excluding the " vacant space " category

Source: Assessors Department, 1968.

namely, restaurants (18), barber shops (17), beauty shops (15), real estate agents (15) and finance and loan companies (13). These represented about 21 per cent of the total business establishments. At the other extreme, 21 kinds of business facilities were represented by two or less establishments. The personal services group accounted for the largest number of establishments (19.3 per cent) among the major groups. It is followed in order of importance by the finance (15.0 per cent), other retail (13.7 per cent), hardware, furniture and household appliances (10.23 per cent), community services (8.4 per cent), food (8.4 per cent), services to business (8.4 per cent), automobile (7.8 per cent), apparel and accessories (3.7 per cent), miscellaneous services (3.4 per cent), and general merchandise (1.55 per cent) groups.

The relative importance as measured by proportions of operating space for each major business type is shown in Table VII and Figure 24. By far the most important space consumer is the automobile group which occupied almost one-third (32.15 per cent) of the total operating space. The relative importance of each major business type areas follows: community services (21.0 per cent), food (8.9 per cent), personal services (8.7 per cent), the hardware, furniture and household appliances (8.2 per cent), finance (6.3 per cent), other retail (6.0 per cent), general merchandise (3.8 per cent), services to business (2.6 per cent), apparel and accessories (1.4 per cent) and miscellaneous services (0.9 per cent).

By expressing the number and floor space of each major business type in percentage terms, and by comparing the percentages in each corresponding business type, certain aspects of space consumption emerge. The result of this analysis was presented in graphic form in Figure 25. It is apparent that although certain functions are unimportant from the standpoint of numbers of establishments found in their type, they

are important in terms of space consumption. The prime space consumer appears to be the automobile group, in which new and used car dealers and service stations are the main constituents. This group occupied about one-third of total selling space, but only represented 7.76 per cent of the total establishments. The community services group ranked second in the amount of space consumed, representing about 21 per cent of the total usable space although it constituted only 8.4 per cent of the total number of establishments within the commercial development.

Businesses that are less intensive space consumers include such categories as personal services, finance, other retail stores and services to business. The personal services group, which ranked first in terms of number of establishments (19.3 per cent), occupies only the fourth position (8.7 per cent) in the total usable floor space. The finance group, which took up 15.2 per cent of the total number of establishments, represented only 6.3 per cent of the total usable space.

Types of Tenure

Question 4 of the questionnaire was designed to obtain specific information concerning the type of tenure of the business establishments. The operators were asked whether they were the owners of the building. A total of 138 establishments responded to this question. These were listed in Table VIII which shows the characteristics of respondents by type of tenure. There was quite a substantial percentage of owner-occupied establishments (27.0 per cent). Most of these reported to be in the food group, the personal services, the automobile and the hardware, furniture and household appliances groups. By far the greatest percentage, about 73 per cent of the respondents, were renters or leaseholders. Establishments dealing in the personal services, the finance

and the other retail groups formed a significant proportion of the tenant category.

TABLE VIII - CHARACTERISTICS OF ESTABLISHMENTS BY TYPE OF TENURE

Types of business	Owner	Tenant
Food group	6	3
General merchandise	1	0
Automobile group	3	4
Apparel & accessories	0	6
Hardware, furniture & household appliances	7	9
Other retail stores	3	15
Finance group	6	27
Community services	1	7
Personal services	7	17
Services to business	2	6
Miscellaneous services	1	7
Total	37	101

Source: Questionnaire data, 1969.

Size of the Establishment

Size of the establishment can be expressed in terms of number or employees employed or the amount of space consumed by the individual firm. In question 5 of the questionnaire, operators were asked to give the number of people they employed. The results are summarized in Table IX. Of the 139 respondents, 64 per cent reported that they had five or less employees. About 12 per cent of the respondents had no employees. In most cases, these were owner-operated with no outside assistance, or perhaps with unpaid family help as was the case in many

of the grocery stores. Fifty-three per cent had employees ranging from one to five in number. Most of these were operators in the food, the personal service and the finance firms.

TABLE IX - SIZE OF ESTABLISHMENTS BY NUMBER OF EMPLOYEES

No. of employees	No. of establishments	Percentage
0	16	11.51
1-5	73	52.52
6-11	20	14.39
11-15	13	9.35
16-20	3	2.16
Over 20	14	10.07
Total	139	100.00

Source: Questionnaire data, 1969

The largest units, that is, those with over twenty employees, represented only 10 per cent of the total respondents. They were mainly establishments in the automobile group, the community services group, and the hardware, furniture and household appliances group.

Another interesting feature concerning the size of the establishments can be seen from the amount of usable space they consume. Table X shows the size of the establishments by the amount of operating space they owned. Of the total 136 respondents, about 49 per cent had a selling space of 1,000 square feet or less. These were mainly represented by restaurants, grocery stores, meat markets, bakery shops, beauty and barber shops, real estate agents, and those dealing in the other retail group. Only 24 per cent of the establishments reported that they had

a selling space of over 2,000 square feet. Of these establishments in the automobile group, the hardware, furniture and household appliances and the community services group occupied the greatest number.

TABLE X - ESTABLISHMENTS BY SIZE OF OPERATING SPACE

Area in Sq. Ft.	No. of establishments	Percentage	Cumulative Percentage
Less than 200	8	5.88	18.38
201 - 400	17	12.50	18.38
401 - 600	16	11.77	30.15
601 - 800	15	11.03	41.18
801 - 1,000	10	7.35	48.53
1,001 - 1,500	28	20.59	69.12
1,501 - 2,000	10	7.35	76.47
Over 2,000	32	23.53	100.00
Total	136	100.00	

Source: Questionnaire data, 1969.

The relatively small size of many of the establishments may have been accounted for by the fact that most of the commercial buildings are not of single occupancy; many of the buildings have been subdivided for two or even three sub-tenants. From the above data thus far represented, it is evident that a substantial proportion of the business establishments on Whyte Avenue can be considered as small businesses.

Rental Characteristics

In Question 7 of the questionnaire, operators were asked to give their annual rent per square foot. The responses are presented in Table XI. Excluding the 'owner-occupied' category, about 41 per cent

TABLE XI - RENTAL CHARACTERISTICS OF THE ESTABLISHMENTS

Annual rent in dollars per square foot	No. of establishments	Percentage
Below 1.00	12	8.96
1.00 - 1.50	14	10.45
1.51 - 2.00	14	10.45
2.01 - 2.50	15	11.19
2.51 - 3.00	18	13.43
3.01 - 3.50	10	7.46
Over 3.50	14	10.45
Owner-occupied	37	27.61
Total	134	100.00

Source: Questionnaire data, 1969

of the respondents pay an annual rent of two dollars or less per square foot. Closer examination reveals that most of establishments in these categories are either large space consumers, such as automobile-related business, furniture stores and recreational services, or small businesses, such as grocery stores, meat markets and barber shops. Those that pay a relatively higher annual rent (three dollars or more per square foot) are predominantly more intensive space consumers; that is, these that can make a higher profit per unit area. These include banks and specialty stores such as florists, jewellers and drug stores. It is significant to observe that businesses located at the corner of blocks or at major street intersections usually pay a higher annual rent, because they are more exposed to pedestrian and vehicular traffic. Differences in rent also exist for different levels of the building.

Establishments occupying ground floor locations usually pay a higher rent than those located above the ground floor, or in the basement.

Spatial Distribution of Types of Business Establishments

It is apparent that bussiness establishments on Whyte Avenue are not evenly distributed. Certain sections of the street are more densely built-up than other sections. Reasons for this uneven distribution have been discussed in Chapter I. It will suffice to mention here only the main factors contributing to this phenomenon. These include the differential residential development abutting the avenue; the direction and volume of both vehicular and pedestrian traffic; the availability of vacant space for new types of establishments; the visibility of the street frontage and the tendency for certain types of function to cluster.

A statistical and graphic picture of the spatial distribution of the various business types on Whyte Avenue is presented in Figure 22. The spatial distribution of the major types of establishments within the development are best revealed by examining in turn each of the functions.

The food group is widely distributed along the ribbon. It is interesting to note that these types of establishments generally locate away from the blocks of the highest land value (Figure 28). This may be indicative of the lower rent-paying ability of such stores, or the fact that they do not require such a location for their operation.

Stores in the general merchandise group, which form an insignificant proportion of the total number of establishments, occupy very strategic positions on the ribbon. Many of them occupy properties of relatively high land value which may be an indication of their greater

ability to support the rent. The largest store in this group is a large discount department store located at the intersection of 104th Street and Whyte Avenue. This store is largely responsible for drawing shoppers to this area. The rest of the establishments in this group are located in an area one block to the east (Figure 22).

Similar to the distribution of food group, the automobile group is located away from the highest land value intersection and hence away from intensively built-up areas. These types of establishments, especially new automobile and used-car lots, very often occupy undeveloped commercially lots (Plate 8). Residential structures were demolished for these businesses. It is interesting to note that four of the largest automobile dealers in the city are located very close to each other in the western section of Whyte Avenue. These are South Park Motors, Don Wheaton, Shirley Ford and Volkswagon Northern. The presence of these large automobile dealers together with used-car dealers, such as Les Koch Mercury Sales and Token Motors, forms an "automobile row" in the western section of the study area (Plates 9 and 10). Other automobile dealers, mainly used-car retailers, are found in the east section of the study area. The value of this commercial ribbon for automobile sales can be evidenced further by the sales located on undeveloped land bordering the C.P.R. railway tracks (Plate 11).

The apparel and accessories group, forming a rather insignificant proportion of the various types of establishments, are generally located in areas where land is intensively developed. A major concentration is located at the intersection of 104th Street and Whyte Avenue, where the discount department store is situated. A number of clothing stores are located in the blocks between 109th and 108th Streets, which forms the

Plate 8: Used car lot occupying isolated vacant lot.

Plate 9: Part of the " automobile row " on the south side of Whyte Avenue, looking east.

Plate 10: Part of the " automobile row " on the north side of Whyte Avenue, looking west.

Plate 11: Used car lots near the Canadian Pacific Railway tracks.

second concentration of stores in the west of the study area. A few clothing and shoe stores are found between 100th and 99th Streets on the north side of the avenue. This block contains a mixture of both old and new stores. On the east end of the block are found the most dilapidated stores. These are presently vacant and appear ready for demolition. On the west end of this block is a small planned neighbourhood (Strathcona Shopping Centre) with eleven stores, in which a men's clothing store and shoe shop are found.

In most cases, hardware, furniture and household appliance stores are large space consumers. It was quite surprising to find that a large number of these stores are located in areas of relatively high land values, especially between 103th and 105th Streets. However, furniture and appliance stores are to be found in old and rather rundown structures in these blocks. Such buildings usually have two-storeys and a basement which provide ample space for display. These relatively old structures may account for the lower rent and consequently the concentration of such stores. Other hardware stores and home furnishing stores usually occupy much better structures and generally show a more dispersed pattern.

As shown in Figure 22, the other retail group includes a variety of retail outlets. Similar to the location of apparel and accessories group of stores, the stores in this group are found in three major concentrations, and are usually located in areas with a concentration of other store types. The greatest concentration is found between 103th and 106th Streets with the heaviest concentration being on the north side of the avenue. Located here are most of Whyte Avenue's jewellery shops. A second concentration, again with a major concentration on the

north side of the avenue, is found between 108th and 109th Streets. The rest are located on the south side of the avenue between 99th and 101th Streets.

Firms in the finance group, are found to be widely distributed throughout the entire ribbon. Banks, finance and loan companies and real estate agents are the most numerous elements within this group. It was found that banks usually occupy corner lots. Most of the firms in the finance group, with the exception of banks and real estate agents, usually have a second floor location. The predominance of real estate agents can be partially explained by service to the rapid turnover of the occupants in the surrounding residential area. The fact that there is a large percentage of the transient, university students some what encourages this rapid turnover of residences. This can also be explained by the fact that the residential area is in transition from a low density residential use to one of medium density (Plate 12).

With respect to the distribution of community services, the less extensive space consumers such as commercial and business schools and medical offices generally occupy second floor locations in areas with a high concentration of other store types. The large space users, such as the hospital, post-office, churches and bowling alleys are spatially associated with other large space users such as automobile dealers and service stations. The nature of these large space consumers almost forms a break to the continuity of the commercial ribbon.

Personal services, which constitute a large number of establishments on the commercial ribbon, are found in almost every individual block. Barber shops, beauty parlors and restaurants represent the most frequently encountered personal services in the various blocks. There

Plate 12: Multi-family residential units replacing single-family dwellings.

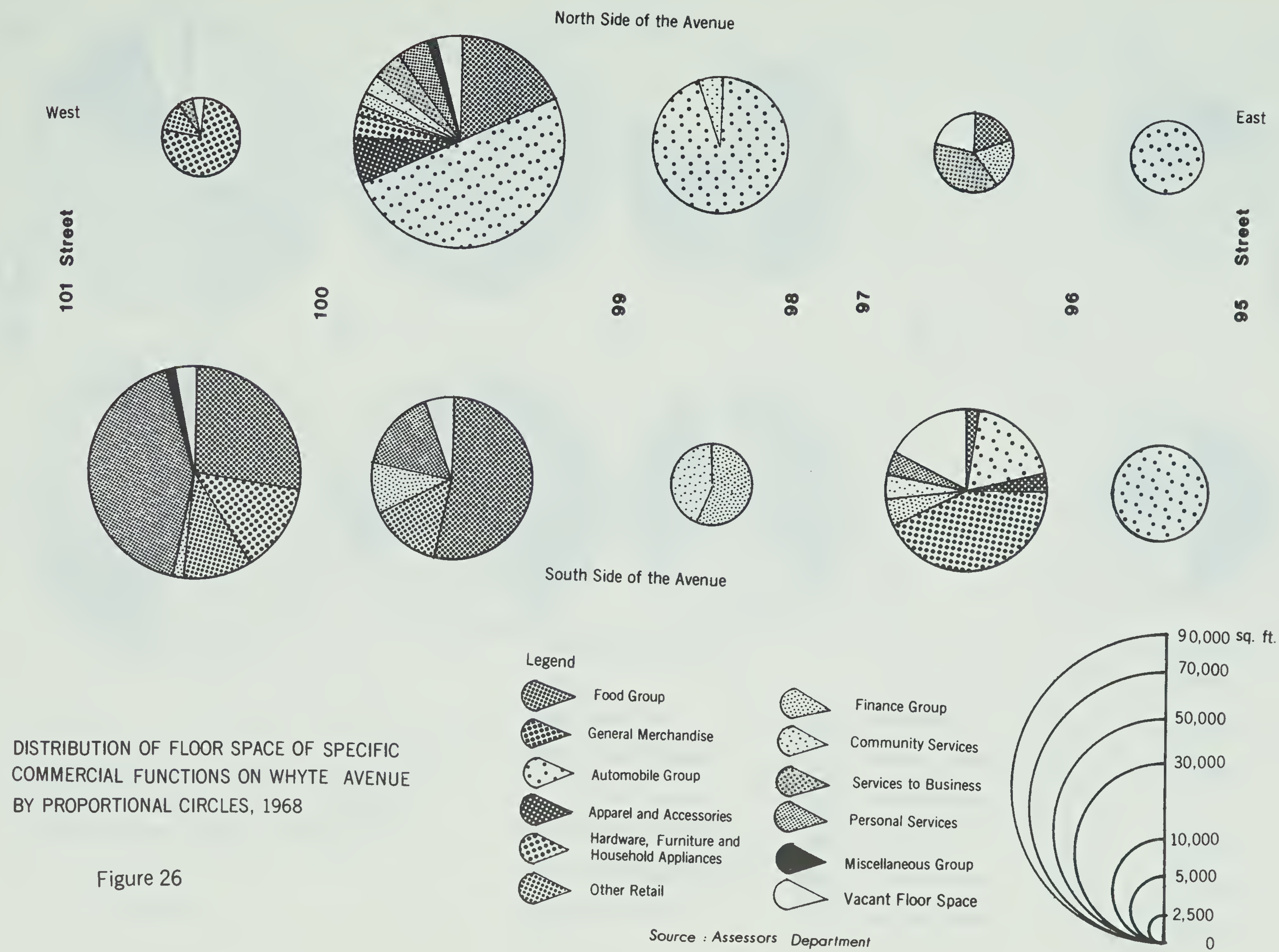
appears to be a trend for many of the high-rise apartments to incorporate such specialized personal services such as barber shops and beauty salons as part of their complex. There is decline in the number of hotels in this area. Many of the former hotels that were located here were turned into rooming type of accommodations as they are unable to cope with the customers who come by automobiles. Hotels, on the other hand, with their facilities for modern living and ample parking space, no doubt, have drawn away a considerable amount of this transient trade.

Establishments in the services to business group, which range from law and accountant offices to printing and duplicating services, do not appear frequently in the study area. In most cases, service establishments occupy the second floor or even the basement of a commercial building. Some are located in the oldest structures along Whyte Avenue.

The miscellaneous services group which also forms a very insignificant proportion both in numerical terms and in relative importance among the various groups of establishments, it mainly located to the east of the peak land value intersection. In contrast to the services to business group, businesses in this group often occupy a ground floor site. This is especially true for photography dearlers.

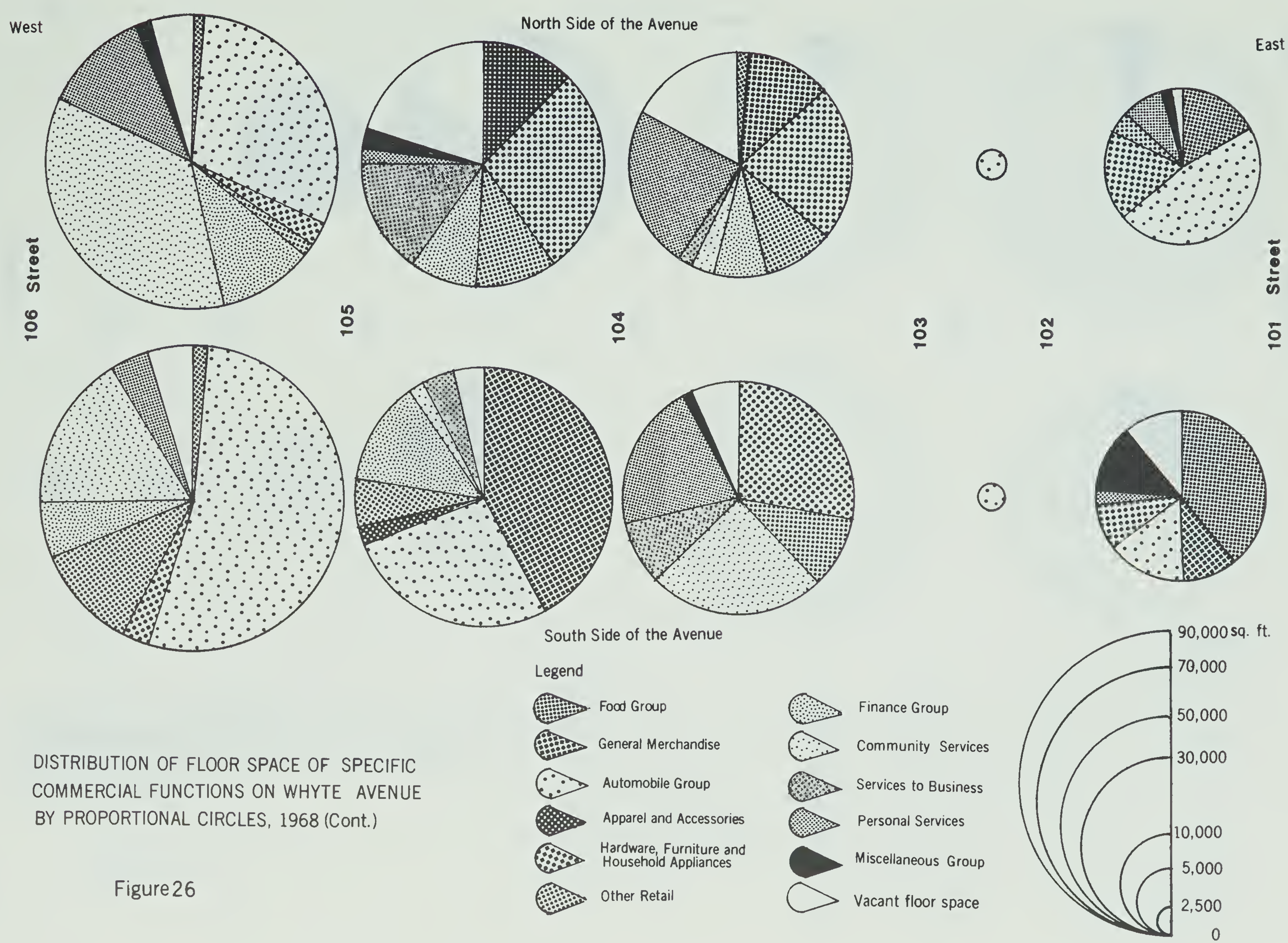
Density of Development

Density of development can be viewed either in terms of numbers of establishments or by the amount of floor space. By reference to Figures 13g, 22, 26 and 27, certain aspects emerge. Figure 13g shows the number of establishments developed in the various blocks on either side of the avenue without reference to type of business. Figure 22



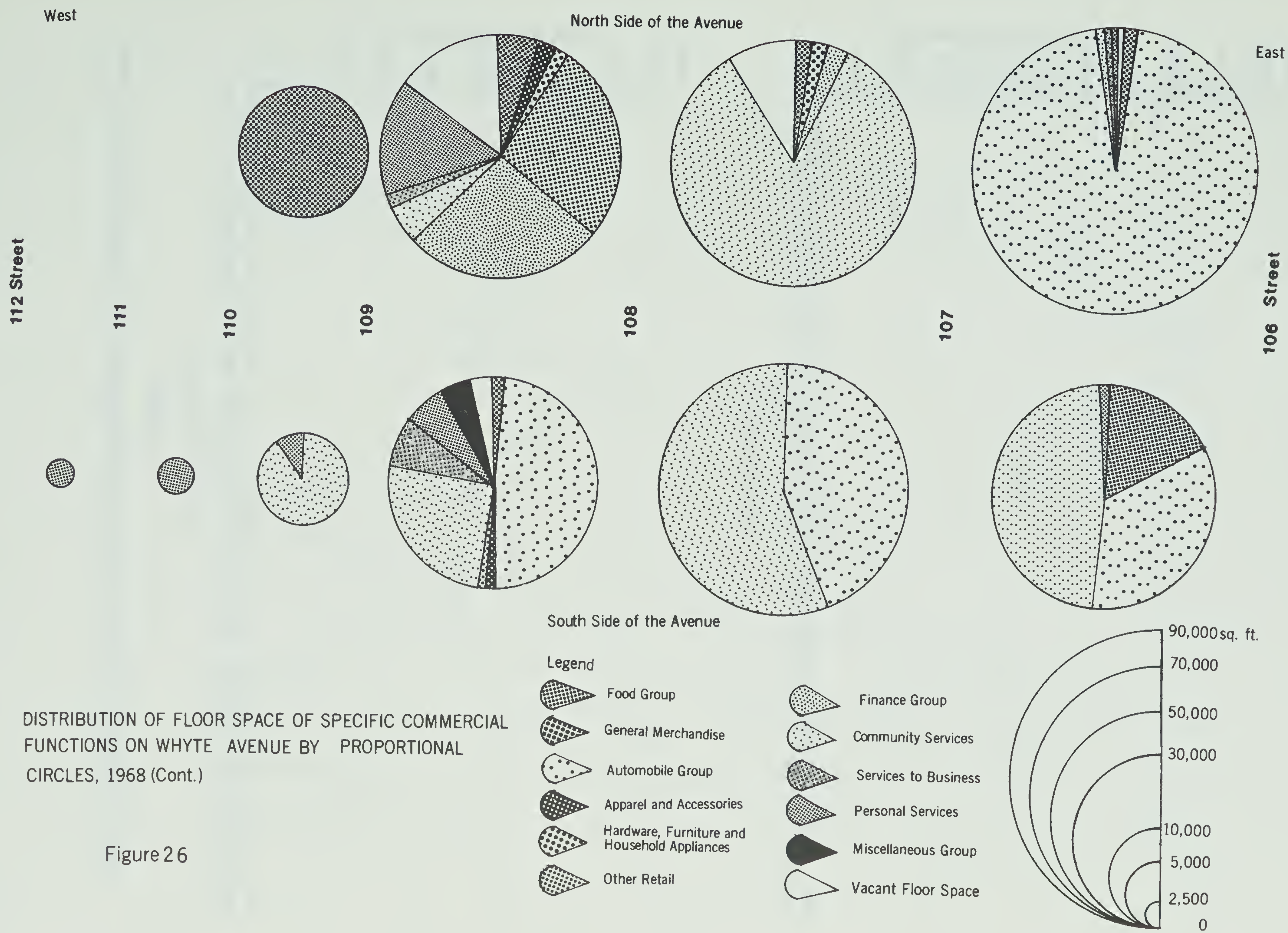
DISTRIBUTION OF FLOOR SPACE OF SPECIFIC COMMERCIAL FUNCTIONS ON WHYTE AVENUE BY PROPORTIONAL CIRCLES, 1968

Figure 26



DISTRIBUTION OF FLOOR SPACE OF SPECIFIC COMMERCIAL FUNCTIONS ON WHYTE AVENUE BY PROPORTIONAL CIRCLES, 1968 (Cont.)

Figure 26



DISTRIBUTION OF FLOOR SPACE OF SPECIFIC COMMERCIAL FUNCTIONS ON WHYTE AVENUE BY PROPORTIONAL CIRCLES, 1968 (Cont.)

Figure 26

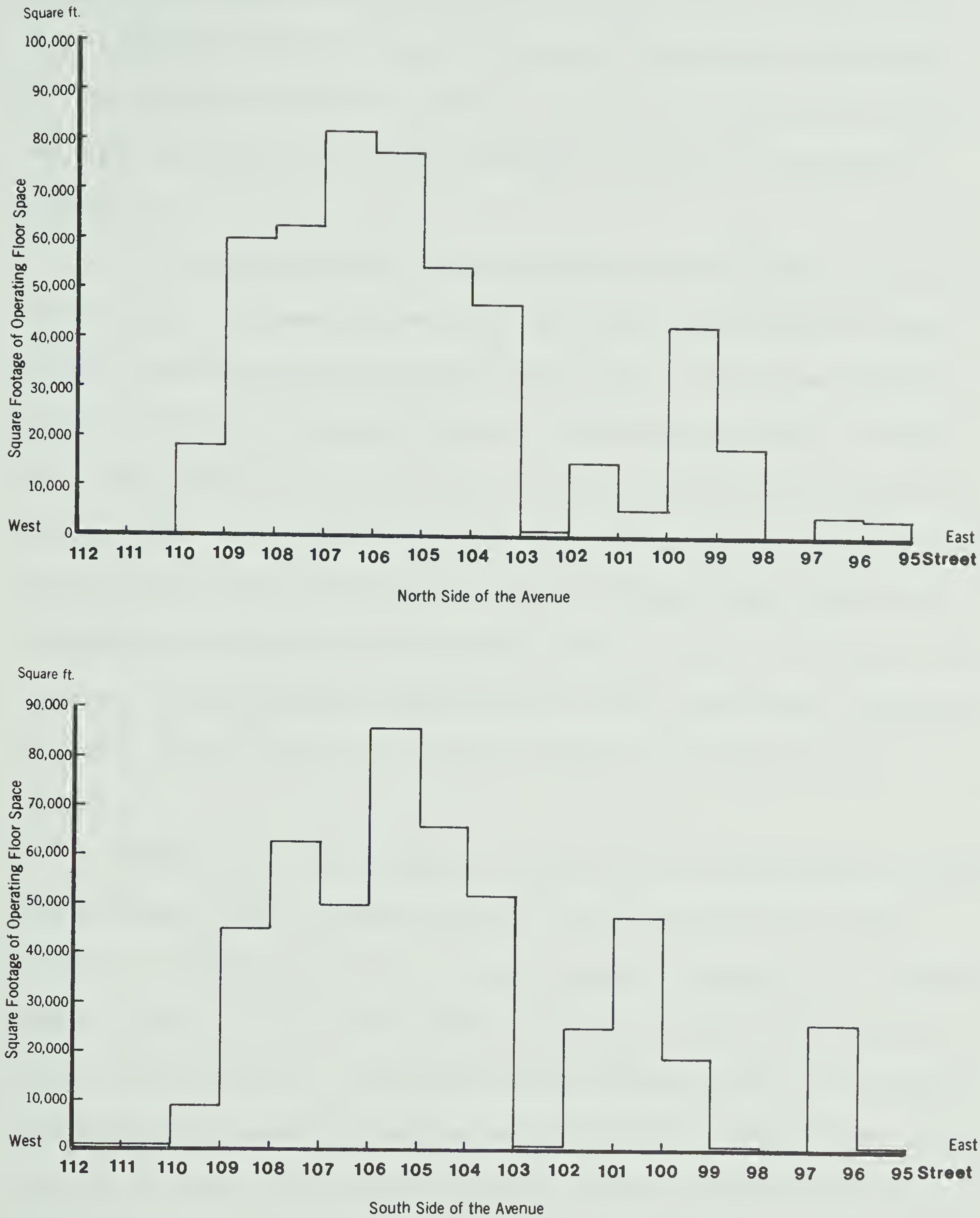


Figure 27

Profile Charts: Square Footage of Business Establishments in Blocks on Both Sides of Whyte Avenue, 1968

gives a finer break-down of the various establishments located along this shopping street. The amount of space consumed for each of the various types of business in turn is illustrated in Figure 26, while aggregate of total usable space consumed in blocks is displayed in Figure 27.

It is noteworthy that certain blocks are more densely built-up than others. The area between 105th and 104th Streets exhibits the highest concentration of business outlets which possess the greatest diversity of uses (33 out of the total 71 different types). These uses range from a large department store to drug stores and barber and beauty shops. The high intensity of land use can be evidenced further by the small size of the establishments. A large number of the store frontages are generally less than the regular 33-foot lot frontage. Lot frontages often have been subdivided into two or more shops; consequently, most of the stores in this section have a very limited display space.

Other blocks which display a high density of development are those found between 108th and 109th Streets. This group of establishments (fifty in number) represents the next largest concentration of establishments in terms of the various types of business establishments present (32 of the 71 total). The blocks between 99th and 100th Streets constitute the next subcentre, with a total of thirty establishments representing 24 types of business facilities. Between 96th and 99th Streets, there is a minor concentration of establishments.

It is also interesting to note that the density of commercial development based on the number and usable space of establishments bears a close relationship on the distribution of assessed land values (compare

Figures 13g, 26 and 27 with Figure 28).[5] It is evident from these maps that areas of high assessed land values often show a high concentration of number of establishments and the amount of usable space that has been developed. As noted earlier, the highest land value intersection is found at the intersection of 104th Street and Whyte Avenue. The blocks around this intersection show the highest density of development in terms number, types of business establishments, and the amount of usable space developed. The structures along this section are closely spaced, forming an almost continuous frontage. Land value tapers off on either side of this highest land value intersection and is broken only by two minor peaks (Figure 28). It was also found that areas having lower density development (in terms of numbers) are usually occupied by large space consumers such as an automobile dealership, church, hospital, or a residential element.

Density of development, in terms of numbers of establishments, is also related to age of development. The older sections of the ribbon are more closely spaced, forming an almost continuous building frontage, than those developed at a later day, where the nature and functions of the business types lend themselves to a more open appearance.

FUNCTIONS OF THE COMMERCIAL RIBBON DEVELOPMENT ON WHYTE AVENUE

Functions of the commercial ribbons have been examined by geographers, economists and planners. However, most of these studies, as stated by Boal and Johnson , suffer from a limited emphasis:

> ...Commercial ribbon studies tend to be morphological in character, examining what kinds of establishments are found in large-scale linear developments, and then making a series of assumptions about the functional roles of these establishments(Boal and Johnson, 1965, p.155).

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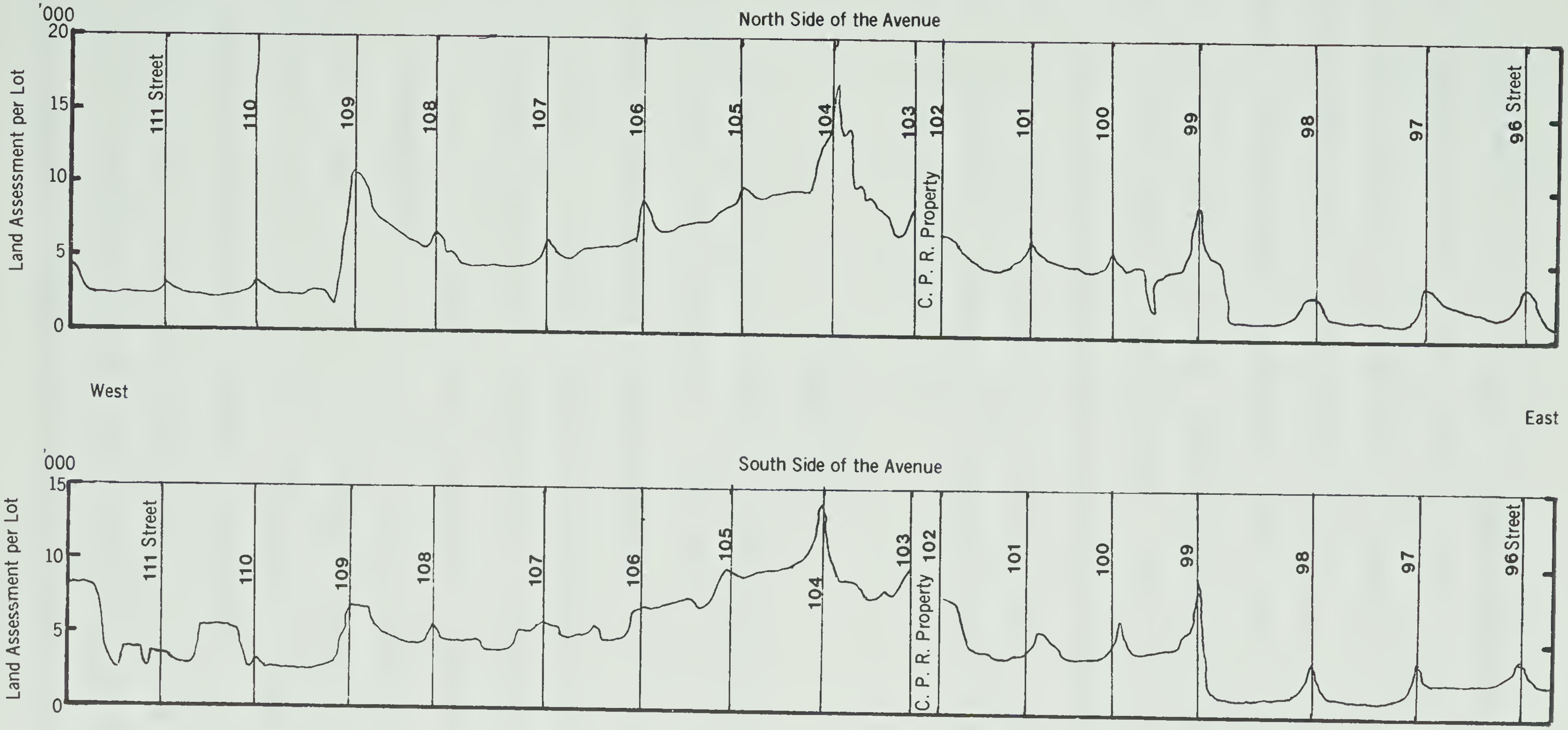
[5] The assessed valuation of city lots was selected as an adequate index of land values, even though they represent only a proportion of the total real market value.



Land Value Profile along Whyte Avenue

Source: Assessors Department

Figure 28

In view of the inadequacy of these studies, the function of the ribbon will be the main theme of this section. Questionnaire data, which gave information on trade areas, customers served and customers' mode of transportation, will be used to analyse the functional importance of Whyte Avenue. Informants were asked to make judgements on the relative extent of their trade area and the customers they served and their mode of transportation. The estimations presented by the operators may not coincide with the actual situation, but they do reflect the respondents' perception of the extent of their trade area, types of customers and the mode of transportation by which their customers visit their establishments.

Trade Areas

Question 9 asked the operator of the establishment to determine the areal extent of his business. Trade areas were classified into four categories as appeared in the questionnaire: (1) your own neighbourhood; (2) all of Edmonton; (3) all of Alberta, and (4) others, in which respondents were asked to specify the uncategorized trade area. The responses to this question are presented in Table XII.

An examination of trade areas reveals a marked diversity. Most of the respondents (46 per cent) responded that their service or trade area extended to "all of Edmonton". These were followed by the 23 per cent who reported that their business covered their "own neighbourhood ". Roughly 17 per cent reported that their business served "all of Alberta ".

It is interesting to note that a large percentage of the establishments appear to depend upon a large trading area rather than the

TABLE XII - AREAS SERVED BY TYPES OF BUSINESS ESTABLISHMENTS

Type of Business	Your own neighbourhood	All of Edmonton	All of Alberta	Other	Total
Food group	4	4	1	0	9
General merchandise	1	0	0	0	1
Automobile group	0	4	2	2	8
Apparel & accessories	3	1	2	0	6
Hardware, furniture & household appliances	1	10	3	2	16
Other retail stores	6	5	2	5	18
Finance group	6	15	4	8	33
Community services	1	5	2	0	8
Personal services	9	13	1	1	24
Services to business	0	3	3	2	8
Miscellaneous services	1	4	3	0	8
Total	32	64	23	20	139
Percentage of total	23.02	46.04	16.55	14.39	100.00

Source: Questionnaire data, 1969

immediate neighbourhood. They draw customers from all parts of the city and even from parts of the province.

Establishments reporting that their trade areas covered "all of Edmonton" were mainly in the finance group, the personal services group, the hardware, furniture and household appliance group and the automobile group. Establishments of the various groups located on the ribbon no doubt depend greatly upon the accessibility of the street to the urban market as most of their customers were reported to come by car. Several establishments in the food group reported that their trade areas cover "all of Edmonton " These include bakery shops, which also carry out a wholesale service.

Those who reported that their business mainly served their own neighbourhoods were establishments of the food group, the personal services group, the other retail group and the finance group. This suggests that the commercial ribbon not only serves a wide area in the city, but also performs an important neighbourhood function to the surrounding local area, providing convenience goods such as drugs and groceries. The relatively high proportion of establishments serving the immediate neighbourhood may be explained by the location of the commercial ribbon. The fact that Whyte Avenue crosses through a densely populated residential area of the city suggests that a substantial group of residents within a short distance of the ribbon may account for a relatively high proportion of goods bought on the ribbon. This will be discussed later.

The regional function performed by the commercial ribbon cannot be overlooked, as a substantial proportion (17 per cent) of the total

respondents reported that their businesses served "all of Alberta". Most of these responses came from establishments performing scientific and engineering, construction, medical, insurance and loan services.

Those listing the "other" category specified a wide variety of market areas, ranging from serving a portion of the city of Edmonton, such as the southern portion of Edmonton, to a much large area, such as "a 50 miles radius of Edmonton," which was stated by a finance and insurance company. Other areas specified included "Northern Alberta" the "Peace River district" and the provinces of British Columbia, Manitoba and Saskatchewan. The Yukon and the Northwest Territories were also mentioned. The results of this data manifest the diverse functional roles of the commercial ribbon.

Customers Served

In Question 14, operators were asked to judge the types of customers they served. Customers were classified into three categories: (1) mostly regular; (2) mostly new-comers; and (3) about the same. Table XIII displays these results.

About 64 per cent of the total 136 respondents reported that their customers were "mostly regular." This percentage was largely accounted for by firms in the personal services, finance, other retail stores, and food groups. As many of these establishments reported previously that their trade areas covered mainly their neighbourhood, it is therefore reasonable to conclude that most of these "regular" customers are from the immediate neighbourhood. With regard to the substantial proportion of respondents in the automobile, hardware,

TABLE XIII - CUSTOMERS SERVED BY TYPES OF BUSINESS ESTABLISHMENTS

Types of establishments	Mostly regular	Mostly new comers	About the same	Total
Food group	6	1	2	9
General merchandise	0	0	1	1
Automobile group	5	1	2	8
Apparel & accessories	5	0	1	6
Hardware, furniture & household appliances	8	3	4	15
Other retail stores	12	1	5	18
Finance group	19	4	8	31
Community services	4	0	4	8
Personal services	19	0	5	24
Services to business	6	0	2	8
Miscellaneous services	3	3	2	8
Total	87	13	36	136
Percentage of total	63.97	9.59	26.47	100.00

Source: Questionnaire data, 1969.

and furniture and household appliances, and automobile groups. Establishments in these groups benefit from location on a commercial thoroughfare. Consequently, they not only supply regular customers from the immediate neighbourhood, but certain establishments, such as service stations, new and used automobile dealers, restaurants, furniture stores, theatres, and real estate agents, also serve a significant portion of the transients.

It is significant to note that the drug stores, groceries, meat markets and bakery shops, which used to supply only their immediate neighbourhood with convenience-goods now appear to attract customers from a wider trade area. This may be accounted for by the widespread use of the automobile. The trend of small food stores to enlarge their trade areas also has been recognized by Cook (1969, p. 88).

Customers' Mode of Transportation

Mode of transportation forms one of the basic factors for determining the type of customers that are served by the commercial establishments. Such information also helps to provide insight into the problems faced by the operators, as will be discussed in the following chapter. Question 13 was designed to obtain information concerning the means of transportion by which potential customers arrive on the strip. The results of this question are shown in Table XIV.

The data indicates that the most important means of transportation is the automobile. Of a total 172 responses, 112 or 65 per cent reported that their customers arrived by car. A very insignificant proportion regarded that customers arrived by car were of a second or third order importance.

TABLE XIV - MEANS OF TRANSPORTATION OF POTENTIAL CUSTOMERS TO BUSINESS ESTABLISHMENTS ON WHYTE AVENUE

Order of importance		(1)		(2)		(3)		(4)	
		No.	%	No.	%	No.	%	No.	%
Means of transport	Car	112	65.12	15	20.55	2	2.94	0	0
	Walk	36	20.93	21	28.77	33	48.53	2	50.00
	Bus	17	9.88	37	50.68	31	45.59	0	0
	Other	7	4.07	0	0	2	2.94	2	50.00
	Total	172	100.00	73	100.00	68	100.00	4	100.00

Source: Questionnaire data, 1969.

This clearly indicates the function of the commercial ribbon as an important shopping area for a mobile population. Ease of access indeed, makes major traffic arterials attractive to many businesses functions.

The fact that a large population resides within walking distance to Whyte Avenue, no doubt accounts for the relatively high proportion of respondents (21 per cent) who stated that the most important trip mode of their customers was by foot. A substantial number of respondents placed walk-trips as being of second and third order of importance. This suggests that many of establishments located along the ribbon serve the neighbouring residents with not only convenience-goods, but also with a certain amount of shopper-goods.

In spite of the fact that a large proportion of customers travel by automobile, a fair proportion of the customers, about 10 per cent come via bus. This means of transportation has lost much of its former importance. The widespread availability of automobiles and the popular use of the individual car has rendered this mode of transportation, to a certain extent, functionally obsolete. However, mass transportation is still important for those who do not own cars and for senior citizens.

A negligible number of responses (4 per cent) regarded other transport means as the most important method of making contact with their customers. Those who reported this were scientific and engineering services, printing and duplicating offices, plumbing and repairs shops, insurance and trust companies, real estate firms. Most of their customers make contact by telephone or through mail correspondence. Others, such as laundries and cleaners, make regular "pick-ups" from their customers.

The questionnaire data suggest that there exists a diversity in the character of the trade areas and the type of customers served by the various types of establishments. A mixture of speciality, shoppers, and convenience-goods establishments not only serve the immediate neighbourhood, but frequently draw customers from all parts of the city, and even outside the Alberta. This leads to the conclusion that a commercial ribbon is multifunctional, serving a variety of trade areas. This fact also emphasizes the difficulty that exists in delimiting precisely the trade area of the commercial ribbon as a whole. The commercial ribbon is also multifunctional in the types of customers it serves. The various types of establishments located on the ribbon draw a variety of customers. The data suggest that most of the customers who visit the establishments are regular patrons. A less significant proportion of the establishments serve both new and regular customers. It is significant that a certain proportion of the establishments depend heavily upon the passing, heavy traffic. It is therefore possible to conclude that Whyte Avenue caters to, and is dependent on, customers not only from the nearby residential area, but also from other parts of the city. With regard to the customers' mode of transportation, it was noted that the automobile is by far the most important transportation medium. The location of a commercial ribbon in a residential district also favours the establishment of convenience-type stores. This consequently accounts for a high percentage of the walk-trips on the ribbon. A significant portion of the establishments reported that their customers came by the bus, as Whyte Avenue is one of the more important bus routes in the city.

AN ANALYSIS OF THE MAIN LOCATIONAL FACTORS OF THE COMMERCIAL ESTABLISHMENTS ON WHYTE AVENUE

Question 11 was designed to reveal the reasons why the various establishments selected their present site. A number of factors were listed and the operators were asked to rate the importance of each. It should be noted that the respondents mentioned one or more reasons for locating their businesses on the ribbon, and thus the responses to each factor will not be the same when added together. Table XV summarizes the data on the importance of the various location factors.

When examining Table XV, it becomes quite apparent that the most significant factors influencing the location of the establishment are: nearness to passing traffic, suitable building and/or land, and sufficient parking space. Seventy-four respondents placed "near to passing traffic" in the "very important" category. Only 25 and 22 listed somewhat important and not important. This suggests that a substantial proportion of the establishments think that they derive their business from passing traffic. It is further noteworthy that only 18 per cent of the 121 responses in this category regarded near to passing traffic as not important. These were establishments catering mainly to the immediate neighbourhood. Other establishments which depend upon mail-orders or telephone calls as their chief media of customer contact also regarded this factor as not important in choosing their present site.

Of the 125 responses, 58 per cent regarded that the factor of suitable building and/or land was very important for selecting their site. Certain business establishments require a specific layout or site for their successful operation. Only 41 (33 per cent) and 11 (9 per

TABLE XV - FACTORS GIVEN BY RESPONDENTS IN SELECTING SITE

Factors / Order of Importance	Suitable building/ land		Sufficient parking space		Near to passing traffic		Good Neighbourhood		Types of business in the area	
	No.	%	No.	%	No.	%	No.	%	No.	%
Very important	73	58.40	69	58.98	74	61.16	47	39.17	39	35.45
Somewhat important	41	32.80	37	31.62	25	20.66	44	36.67	43	39.09
Not important	11	8.80	11	9.40	22	18.18	29	24.16	28	25.46
Total	125	100.00	117	100.00	121	100.00	120	100.00	110	100.00

Factors / Order of Importance	Near to bus line		Low rent		Near to University		Others	
	No.	%	No.	%	No.	%	No.	%
Very important	45	39.13	31	27.43	22	20.00		
Somewhat important	38	33.04	44	38.94	34	30.91		
Not important	32	27.83	38	33.63	54	49.06		
Total	115	100.00	113	100.00	110	100.00	29	

* it should be noted that more than one factor for locating on the commercial ribbon could be listed. The total responses for each factor will not come to the same number.

Source: Questionnaire data, 1969.

cent) of the respondents checked the somewhat important and not important categories.

The widespread use of the automobile as a means of transportation has had profound effect on the location of business establishments. An increasing amount of space has to be provided for those people who come by car. The importance of adequate parking space can be seen by the large proportion of the respondents (59 per cent) who considered that sufficient parking space was a very important site factor. There is a tendency for automobile-related establishments, restaurants and firms in the other retail group to place strong emphasis on this factor. The negligible proportion (9 per cent) regarding this factor as unimportant were those establishments that gave a negative response to the factor of near to passing traffic.

Forty-seven (39 per cent), 44 (37 per cent) and 29 (24 per cent) of the respondents reported the factor of good neighbourhood as very important, somewhat important and not important, respectively. Food stores and personal services such as restaurants, barber and beauty shops and banks rated this as a very important location factor. Less than one-third of the responses placed no importance on this factor.

The types of neighbouring business establishments is important to some stores, because certain stores avoid others of their kind for reasons of competition. Other stores locate near their kind or other kinds of business because they are complementary (Canoyer, 1946, p. 18; Nelson, 1958, pp. 66-67). In general, concentration of an activity seems to be encouraged by an economy of scale. However, nearness to types of business in the area was regarded by just one-third of the

respondents as being a very important factor in site selection. Most of these respondents were automobile dealers.

Other establishments in this category are clothing and shoe stores and restaurants. They derive a certain amount of walk-in business by reason of being located close to the large department store. On the other hand, 25 per cent reported this factor as unimportant. This is due to the large proportion of neighbourhood businesses which expect to attract customers from a very small area, and is also due to the fact that there are a few establishments which do business by correspondence and telephone. The large percentage of responses who regarded this factor as totally unimportant or somewhat important may suggest that a large percentage of customers' trips are single-purpose trips. These may be special trips by those who want specialized services or goods, or trips stemming from the passing traffic which come for convenience goods.

It is particularly interesting to note that while only a small percentage of the respondents stated that their partrons came by bus, a significant proportion (39 per cent) reported that being near to a bus line was a very important reason for selecting their present location. This may be an indication of the advertising value of a heavily travelled arterial, or that most of their employees come by bus because parking is a serious problem for many of the enterprises. The lack of interest in this factor, of course, shows the relatively minor role of public transportation in the shopping process.

Of particular interest, too, is the lack of importance given to the low rent factor as a reason for selecting a present location. About 27 per cent of the respondents cited this as being very important.

There is a tendency for the small food stores, the hardware and furniture stores, and the automobile car lots to place a greater emphasis on the rent factor. This is important for large space consumers and those businesses which have a low profit margin, such as the grocery stores.

Only 20 per cent of the respondents considered that proximity to the University of Alberta as being very important. Approximately one-third reported it as somewhat important, while a majority, about 50 per cent, reported it as not important. Those interested in this factor were banks, coffee houses, barber and beauty shops, novelty and gift shops and florists.

Viewing the 27 responses found in the other category, a variety of factors were given. Several listed the central location of Whyte Avenue as being the major reason. A few mentioned that Whyte Avenue was the largest shopping area when they first came. One mentioned that there was "no competition when started business on Whyte Avenue." Some indicated that "because it is near to my home and it is easier for me to get to work." One owner of the store remarked that the building was "a good buy to him." Others stated that they had no particular preference, just that the site happened to be available and they happened to find it by chance. One respondent commented that he thought such a location could help him "make a living," while two others reported that they inherited the business from a relative. Several remarked that none of the factors mentioned in the questionnaire was important because their business was by telephone or correspondence.

It is apparent that the importance of the various locational factors differ among the various establishments. Generally speaking,

more emphasis has been placed on the factors of nearness to passing traffic, parking facilities and suitability of the building or land, and to a lesser extent on the factors of low rent, types of adjacent businesses and nearness to the university. Considerable importance was attached to being close to a bus-line and the proximity of good neighbourhoods.

CHAPTER III

COMMERCIAL BLIGHT

The economic and social geography of most North American cities has changed profoundly since World War II. Significant changes have taken place in the standard of living, population distribution and transport structure. Bigger stores, new kinds of business, new types of merchandising and planned integrated shopping centres have been introduced. These have changed greatly the customers' shopping habits. In many cases, these changes have brought about imbalances and strains in the established commercial land use pattern. The phenomenon of commercial blight, causing broad areas or pockets of obsolescence and deterioration, has largely resulted from a period of rapid change in the urban system. Cities that are growing slowly and steadily are more likely to be adjusted physically and functionally to their present needs than areas where expansion and internal shifts have been explosive and sporadic. Thus one of the greatest problems of a rapidly growing city is how to maintain , control and guide its growth to meet the conditions of change in order to minimize, if not to prevent, the occurrence of blight.

The phenomenon of commercial blight has only recently gained the attention of urban geographers (Berry, 1963 ; Simmons, 1966). Their studies have demonstrated that the areas most susceptible to commericial blight are the older commercial ribbons which have experienced the full impact of the planned shopping centres with their superior parking spaces and modern facilities (Berry, 1963, pp. 191-195 ; Simmons, 1966, pp. 74-76).

This chapter investigates the problem of commercial blight on a commercial ribbon during a period of relatively rapid urban expansion. The phenomenon of blight is, therefore, examined in conjunction with the study of the evolution and the changing functions of the commercial development on Whyte Avenue. This chapter is mainly concerned with an examination of the forms of commercial blight, and an investigation of the causal factors behind them. The definitions and the concepts of blight are also discussed. Changes affecting the location and operations of commercial facilities are stated and assessed with a view to explaining the basic factors related to commercial blight in general. Data in this section relies heavily on information obtained from the questionnaire survey of 1969 (Appendix B). However, data pertaining to other facets of commercial blight such as condition of buildings, age of buildings and building assessments were obtained through personal research into the city assessor's records. The distribution and the amount of vacant commercial spaces were recorded through field survey, and this was again rechecked by examining the business assessment records in order to obtain data on the amount of vacant spaces. The result of such an investigation should enable us to have a better insight into the problems afflicting the commercial ribbons to-day.

DEFINITIONS AND CONCEPTS OF COMMERCIAL BLIGHT

The Webster's Dictionary gives the definition of blight as " any disease, sympton of disease, or injury of plants characterized by or resulting in withering, cessation of growth, and a more or less general death of parts ," or " that which impairs or destroys " (Gove and Webster, 1965). Thus, blight constitutes an abnormality in the healthy

state of an organism. An examination of the literature reveals a variety of interpretations of the term "blight". It has been used to describe symptoms and causes. The Planning Department of the City of Edmonton in the General Plan, City of Edmonton, Alberta states:

> Blight may be the deterioration of a single dwelling, a group of buildings or an entire neighbourhood. Blight is caused by dilapidation and aging of structure, poor maintenance, and obsolescence of dwellings, overcrowding, lack of adequate community facilities, faulty land use and street patterns, air pollution and noise or the disrupting effects of arterial transportion systems (1967a, p. 110).

Woodbury (1959, p. 11) uses blight as a general term to refer to an area or district showing substandardness in living condition, and that it is characterized by stagnation and deterioration. In the case of commercial areas, the term has been applied to such phenomena as dilapidated buildings, vacant commercial stores, and other nuisances including traffic congestion and parking problems (Berry, 1963).

Three fundamental elements seem to unify the concept of blight: (1) nonacceptance; (2) depreciation; and (3) real property (Breger, 1967, pp. 369-376).

Nonacceptance has been singled out as the most prominent of these elements for it is the fundamental symptom of urban blight. This is followed by depreciation in the real property either functionally or socially. The area of depreciation delimited by nonacceptance is manifested in the real property. Consequently, real property forms the "recognized universe" of urban blight (Breger, 1967, pp. 369-376).

Nonacceptance implies subjectivity and community concensus when assessing a real property to be blighted. The process of nonacceptance involves functional depreciation (loss of productivity) or social depreciation (loss of prestige) or both.[1]

Functional depreciation may result either from the deterioration of the capacity of the existing structure to render service or from a decline in demand for the service redered. Lack of demand leads to under-maintenance. This further diminishes the usefulness of the real property. Each district, community or use develops its own standards, an encroachment of these standards is the beginning of obsolescence of the real property. Functional depreciation is usually the consequence of technological innovations and land use changes.

Social depreciation of real property may result from the continuous ascent of social values in the community or degeneration of the quality of the real property. Standards for acceptable conditions and use depend upon the social values of community at a particular moment in time. They may vary greatly due to differences in income, cultural background and the stage of technological development of the community. Social depreciation is directly related to the forces of urban growth and economic progress.

On the basis of these unifying elements, Breger describes urban blight as " ... a critical stage in the functional or social depreciation of real property beyond which its existing condition or use is unacceptable to the community" (Breger, 1967, p. 372).

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1 Depreciation, as defined by D.T.Schumacher, is " a lossin value of an asset due to any cause ". The loss may be physical, aesthetic, social or economic. Generally speaking, it is caused by factors of deterioration and obsolescence. See D.T. Schumacher, " Determining Physical Depreciation, Functional and Economic Obsolescence", Technical Valuation, Oct., 1956, pp. 19-20; and Edmund Leet, " The Use of Depreciation in the Valuation of Property for Ad Valorem Tax Purposes ", Technical Valuation, Feb.1958, pp. 51-53.

Studies in Chicago and Toronto have identified for possible forms of commercial blight : (1) physical blight, which occurs when the structure occupied by a business has deteriorated; (2) frictional blight or environmental blight, which exists when the nearby land use has a deleterious effect upon the operation of business; (3) functional blight or technological obsolescence, which results from technological change which renders location, size orlayout of the structure unsuitable for commercial functions; and (4) economic blight, which exists when changes on the demand side lead to losses of markets, thereby creating an excess of commercial space (Berry, 1963, pp. 179-181; Simmons, 1966, p. 2).

Before discussing the various forms of commercial blight identified on Whyte Avenue, it is important to review those changes in the commercial structure which are responsible for initiating the phenomenon of commercial blight. Some, if not all, of the changes discussed in the following section are responsible for constituting the various problems faced by many of the business operators in the study area.

CHANGES AFFECTING THE CITY'S COMMERCIAL STRUCTURE

Three major changes have been singled out for discussion as they bear special significance in affecting the commercial structure of most of North American cities. They are (1) population mobility and population shifts; (2) rise of new forms of competitors and the growth of new interceptors; and (3) changes in merchandising.

Population Mobility and Population Shifts

The occurrence of commercial blight has, to a large extent,

resulted from technological innovations which change greatly and rapidly a person's way of living. One of these technological innovations is the introduction of the automobile which has greatly increased the mobility of the general mass and widened the location choice of many economic activities. Bello (1958, p. 58) remarks that, " Of all the forces reshaping the American metropolis, the most powerful and insistent are those rooted in changing modes of transportation ". Whitnall (1941, p. 443) suggests that " probably no single mechanical factor has contributed so vast a change in our way of living as has the automobile in the four decades since its introduction".

Industries, retail and service activities, and population began to break away from their original bonds as a response to the development of motor vehicles. Consequently, urban sub-centres appeared in increasing numbers and in many cases, they grew at rates in excess to those of the centres (Duhamel, 1969, p. 62). The central areas of many large cities have stablized or are declining in terms of population. In instances where growth has occurred, it is slight and not in proportion to the growth in the suburbs. As observed by Schnore, the functional boundary of the metropolitan area as evidenced by the outward shifts of high growth rates, appears to have shifted from a ring of approximately ten miles to one of twenty to twenty-five miles in diameter (Schnore, 1965, p.88). In the Edmonton situation, trends in the increase of population follow much the same pattern as in many of the North American cities. Much of the population increase during the last decade took place in the new subdivisions of the city as evidenced by the rapid physical expansion of the city (Figure 6), while

a significant decrease had occurred in the older portions of the city.[2] The significance of this fact is that the traditional shopping districts are becoming increasingly isolated from their potential or even their original customers.

Suburbanization and decentralization are not the only problems facing the traditional shopping districts. In many cases, their sales volume has been decreasing due to the changing socio-economic status of the population within the city. The pattern of suburban growth has implications for the socio-economic structure of urban areas. For many American cities, the higher income residents have moved to suburbia, leaving behind vacuums to populated by the lower socio-economic groups (Grodizins, 1964, p. 119). Many studies have demonstrated that cities and the suburban areas are becoming more and more dissimilar in composition (Ogburn, 1937; Ducan and Reiss, 1956; Kish, 1954, pp. 388-398; Bogue, 1954; Schnore, 1963, p. 84; Mehta, 1963; and Farly, 1964, pp. 38 - 47). The suburban areas have shown not only rapid growth in total numbers, but proportionally greater increase in population of higher socio-economic status. These shifts have taken the consumers' purchasing power from the original areas to the periphery. As a result, business mortality rate has been found particularly high in the relatively old established districts of the city (Berry, 1963, pp. 184-195; Simmons, 1964, p. 126).

Increasing mobility and population shifts within the city and

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2
See Julian G. Suski, Edmonton, Edmonton, 1965, p. 41. The percentage of decrease of population over 5 per cent between 1956-1961 were accounted for by Census Tracts 4,9,10,12,13,14,16,19,22,23,29,30, 31,and 39 which are the older parts of the city.

its outlying districts have therefore special implications for the retail structure. Traditional shopping areas lose support and prestige as a place for shopping. This is one of the main causal factors of commercial blight.

Rise of New Forms of Competitors and the Growth of New Interceptors

The competitors of the traditional shopping districts take the form of planned, integrated shopping centres which are specially designed to meet the current shopping habits of the customers and the demands of the business operators. Stall summarizes the rise of shopping centres in the following statements:

> The planned shopping centre's boom is a relatively new phenomenon. It is an outgrowth of the adaptation of the automobile to the routine of everyday life. It is the commercial response to shopping demands of the growing outlying city and suburban areas. These centres are planned around the premise of providing one-stop shopping, easy automobile accessibility and ample free parking for customers (Stall. 1966, p. 1).

The mushrooming development of planned shopping centres also stems from the inability of the decayed or obsolete commercial structures in the older shopping districts to satisfy the demands of both customers and business operators. These planned shopping centres obviously represent the major shifts in store locations. The large department stores which had been the original advocators and bulwarks of centralization have realized that it is more expedient to suit the shopping habits of their customers by building more branches in the planned shopping centres than to fight against the established trend. Studies have shown that planned shopping centres of all types now account for a greater retail sales in certain merchandise categories than the traditional shopping centres in many of the American cities (Weiss, 1964, p. 8).

The effect of the rise of the planned integrated shopping centres in many cases is devastating for the traditional shopping centres (Rouse, 1963, p. 100). The older commercial districts, especially those along the major arterials, are more vulnerable to competition from these centres than the central business districts. Several factors help to contribute to the unattractiveness of many of the older commercial ribbons: (1) The older commercial ribbons have little of the traditional or emotional value of the downtown area. Without the concentration of office buildings, large department stores, hotels and other entertainment centres, these older commercial ribbons do not offer the atmosphere of excitement or carnival that is characteristic in many of the downtown areas; (2) The problem of congestion is virtually unsolved for most of the commerical ribbons. Welch says that traffic has created " ribbons of blight " (1948, p. 104). Not an insignificant number of commercial ribbons have become the victims of the obsolete street pattern. Most North American cities, with a high proportion of grid pattern streets ,were not designed to accommodate the flow of vehicular traffic. Streets are generally narrow, and they are especially inadequate when they serve the dual functions of access and thoroughfare. They are surely far from being adequate for the added purposes of parking and loading (Stonier, 1957, pp. 214-231). The increasing use of the private automobile further aggrevated the problem of obsolescence in many of the older shopping districts. Proudfoot noted one of the causal factors of commercial blight:

> The personal inconvenience of this [traffic] congestion, and the commutation cost in time and money all have favored the development of the outlying business center, catering to the shopping goods wants of the outlying population (Proudfoot, 1937a, p. 425).

Studies have demonstrated that the development of new shopping

centres arises through a process of interception of customers. Merchants and the shopping facilities themselves leapfrog each other trying to get in between a growing trade area and the location of the older shopping areas closer in (Nelson, 1958, p. 27). Shopping centres are usually located along major arterial routes and highways leading from the older districts to the growth regions. Each new shopping centre in turn hopes to capture the business beyond it. This leads to a growth of several rings of interceptors in many of the large metropolitan centres. The pattern of one or two rings of fairly complete interceptors with a third in formation is the most typical of many American cities (Nelson, 1958, pp. 27-28). Consequently, many districts in the older commercial areas have experienced a period of drastic fall-off of business in a direct competitive loss to these newer centres. In the case of Edmonton, the development of planned shopping centres has become the most significant user of commercial land for the past ten years. <u>The General Plan, City of Edmonton, Alberta</u>, comments:

> They [the planned shopping centres] have reached a high level of development becoming the dominant distributors of food and goods, to a large extent replacing isolated neighbourhood stores and generally supplementing downtown activities.... The development of planned shopping centres and supermarkets is continuing to increase rapidly and this trend is expected to continue (City of Edmonton, Planning Department, 1967a, p. 52).

From the above discussion, it is therefore not difficult to comprehend the great task which the traditional shopping centres and the commercial ribbons, in particular, have to face in order to combat the competitors from the planned integrated shopping centres.

<u>Changes in Merchandising - Marketing Revolution</u>

Another dynamic factor affecting the commercial land use is the

changing method of merchandising. The rapid changes of shopping habits and technological innovations have caused a radical change in the retail marketing of many goods and services. Two major trends in retailing have special implications for the commercial structure.

The first of these two major trends involves the increasing size of retail units. This also involves the expansion of retail volume carried by an individual business unit (Vance, 1962, p. 494). In order to overcome the effects of reduced profit margin and increasing overhead costs, particularly those involving personnel, an individual establishment will strive to reach the optimum size through the operation of internal and external economies of scale (Hoover, 1963, pp. 78-80 and pp. 117-121). This may be done by methods such as altering the size of the firm, specialization and other devices. Studies in other cities have shown that considerable changes have occurred in the operation of the individual firm. Establishments have increased their operating space; growth in the food and general merchandise in particular has been through vertical integration and consolidation (Applebaum and Sckapker, 1956, p. 16; Wingate and Corbin, 1956, p. 60; Simmons, 1964, p. 57; Barr, 1965, p. 89; and Simmons, 1966, p. 6).

The second of these two major trends is the tendency to combine traditionally separated goods lines in one large unit and to provide more automatic services. The traditional lines of merchandise distinction between types of stores are being obliterated (Vance, 1962, p. 494). All mass outlet continue to diversify their inventory. The so called " one-stop " store units cut down the need for customers to visit several stores. The introduction of the automobile greatly increased consumer's carrying capacity, and this in turn makes the " one-stop "

store a popular shopping centre.

Self-service, a case of low-cost operation, is spreading to many kinds of merchandise and stores. Labour costs per unit quantity of goods handled have increased sharply since the post-war period and the self-service method of aiding consumer efficiency, therefore, has been extremely important (Weiss, 1964, p. 323). The development of automatic vending machines will probably have another impact on the existing commercial structure in the near future. In many cities, automatic vendors have already achieved a substantial volume, especially for food items. These machines are installed in large apartments, institutional and office buildings. It is probable that more commodity items in the future will be packed to suit the automatic vendors. The implication of this is that this development could be a significant factor in triggering off a substantial sales volume from the middle-sized and in particular the small neighbourhood stores. In fact many have already envisaged that giant buildings are destined to emerge as an important new store location for these automatic vendors, unattended and having no regard to shopping hour restrictions.

All these changes in consumer behavior and retail and service operations render the latest commercial unit somewhat obsolete and the older units very obsolete. Here lie the fundamental causes of commercial blight.

IDENTIFICATION AND ANALYSIS OF THE MAJOR FORMS OF COMMERCIAL BLIGHT ON WHYTE AVENUE

Physical Blight

Physical blight occurs when the structure occupied by a business deteriorates (Berry, 1963, pp. 179-203). Deterioration is a loss of

the physical ability of a structural member to perform the function for which it is designed and built. It is not to be confused with the loss of value due to failure to satisfy new needs created by changes in equipment, material, styles, laws, adjacent properties,and many other forces which cause a property to lose desirability in the eyes of the informed buyers or sellers (Trowbridge, 1964, p. 91). According to the appraisers, there are two types of deterioration referred to as " curable " and " incurable ". It is measured on a present " cost to cure " basis (Cooper, 1959, p. 9) . " Curable " property means that the condition of the property can and must be remedied without delay; and " incurable " means that the repairs would cost more to make than such an expenditure would add to the value of the property (Trowbridge, 1964, p. 91). This concept is useful in determining the degree to which a property is subject to physical blight. However, this method is not attempted because it is beyond the capacity of the present study.

Structural deterioration is a process of wear and tear. The rate of deterioration depends on age, use, maintenance, and type of building materials of the structure. Deterioration caused by aging results from cracking, drying and softening of materials. It is an effect common to all structures. However, overuse or misuse, such as overcrowding and overloading of the building may hasten the process of deterioration. Deterioration may be controlled or retarded at the initial stage through maintenance and proper care. Generally speaking, the older the structure, the more likely it is to suffer from physical blight.

One of the most direct measurements of physical blight is the identification of run-down structures. This has been used in many urban renewal projects in the analysis and identification of physical blight

(Klove, 1941, pp. 483-484; St. Louis, Missouri, City Plan Commission, 1957; The Metropolitan Toronto Planning Board, 1966). Low building assessments, sometimes well below the land assessment values in many cases, can be an indication of the physical undesirability of the structure.

An examination of the age of the buildings in the study area shows that a majority of these structures were constructed prior to the 1950s (Figure 29). The commercial structures, especially those found between 101th and 106th Streets on both sides of Whyte Avenue, were primarily built in the era of the pre-1930s. In many cases, these structures have fallen into desrepair and can be classified as sub-standard (Figure 30). According to the standards used by the assessor's department of " good ", " fair " and " poor " it was found that a majority of the buildings along the commercial ribbon were rated as " fair," and a few as " good " and a significant portion as " poor." The poor structures were mainly commercial buildings. It was found that the condition of the buildings is closely related to the age of the building (compare the distribution of substandard buildings with the age of buildings in Figure 29). The low property assessment values, in some instances well below the land assessment value, may be indicative of the physical conditions of the buildings (Figure 31).

In order to obtain an evaluation of the physical conditions of the building from the operators' points of view, operators were requested to describe the physical conditions of their buildings (see Question 10 in the questionnaire). The result of the responses is presented in Table XVI. It was found that slightly over one-half (53.2 per cent)

AGE OF BUILDINGS

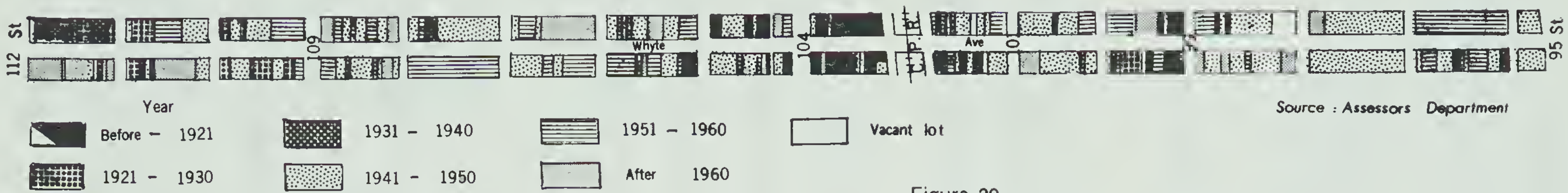

Figure 29

LOCATION OF SUB-STANDARD STRUCTURES

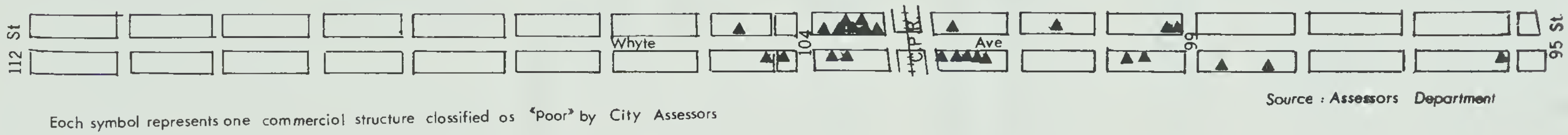

Figure 30

ASSESSED VALUE OF BUILDINGS

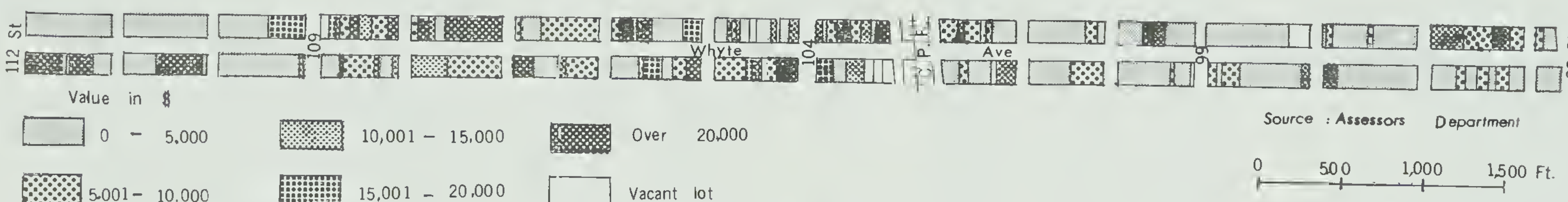

Figure 31

DISTRIBUTION OF VACANT STORES

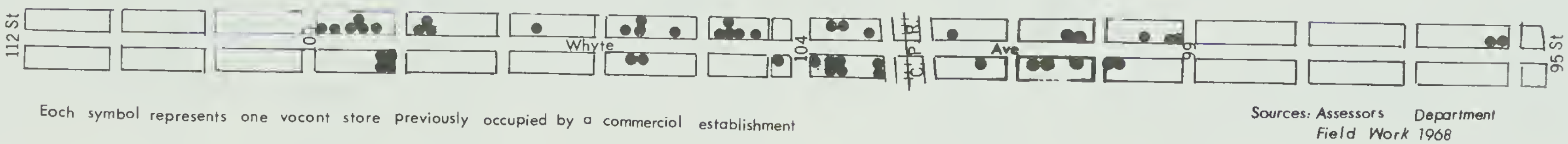

Figure 32

TABLE XVI - RESPONDENTS' VIEWS ON THE PHYSICAL CONDITION OF THEIR BUILDING

Condition of Building	Number of Establishment	Percentage
Good	74	53.24
In need of major repair	54	38.85
In need of minor repair	7	5.03
Other	4	2.88
Total	139	100.00

Source: Questionnaire data, 1969.

of the total respondents replied that the physical condition of their buildings was " good ". Over one-third (38.8 per cent) of the respondents reported that their buildings were " in need of major repair " and about five per cent regarded their physical plants required " minor repair ". The rest of the three per cent in the " other " category can actually be classified as those that required major repair, because they all suggested that their buildings should be demolished. On the basis of the evaluation of the store occupants, it can be concluded that physical blight in the study area has not reached to a critical stage. However, the substandard structures that exist on the ribbon present a problem to many of the operators, as the physical appearance of such structures in a source of frictional blight.

Environmental or Frictional Blight

Frictional blight exists when a business has a deleterious eff-

ect upon surrounding areas or uses, or conversely when the surrounding activities have an adverse effect upon the operations of business. Simmons defines frictional blight as "... the blighting of commercial facilities by other types of land use " (Simmons, 1966, p. 70). Outward manifestation of frictional blight include traffic congestion, smoke , vibration, noise, odour and other forms of nuisances created by other activities. Aesthetic quality can be considered as important for the well-being of the shopping area. The aesthetic appeal of the new integrated shopping centres has been regarded as one of the most important factors contributing to the success of many shopping areas (Fisher, 1950, p. 116). Run-down buildings, littered areas and disorganized arrangement of billboards and signs usually create an impression of stagnation and decline (Nystrom, 1937, p. 462). Vacant stores and lots have the similar effect on the shopping areas. They have been regarded as a form of blight because they are not conducive to investment (Herkman, 1963, p. 594-596). A mixture of industrial and wholesaling activities is generally considered as undesirable for most commercial activities. Generally speaking, principles of compatibility and cumulative attractions can be used as guide lines in locating commercial establishments (Nelson, 1958, pp. 58-75). In the present study, the aesthetic quality and the traffic conditions of the shopping area have been singled out as important factors in determinging the existence of frictional blight. Other factors such as imcompatible land uses which are generally deleterious to the commercial development will be considered.

In Question 12 of the questionnaire, operators were asked to describe the appearance of Whyte Avenue. The aesthetic quality of the street is broadly classified as " attractive ", " fair ", " unattractive,"

and " Other." The percentage of respondents in each category is indicated in Table XVII. It was noted that nearly one-half (46.8 per cent) of

TABLE XVII - RESPONDENTS' VIEWS ON THE AESTHETIC QUALITIES OF THE RIBBON

Aesthetic Quality	No, of responses	Percentage
Attractive	4	2.88
Fair	65	46.76
Unattractive	65	46.76
Other	4	2.88
No response	1	0.72
Total	139	100.00

Source: Questionnaire data, 1969.

the total respondents appraised that the appearance of the shopping street was " unattractive." An equal proportion (46.8 per cent) regarded the shopping street as " fair." Only a small minority (2.9 per cent) rated it as " attractive." Those in the " other " category, forming the remaining 2.9 per cent, described the appearance of the shopping area as " run-down ," " very bad " and " atrocious." Plates 13, 14, 15 and 16 give some idea of the general appearance of the shopping area.

It should be noted that one of the main reasons give for relocation was " unattractive neighbourhood " which forms about eight per cent of the total responses (Tables XVIII and XIX). It should also be mentioned here that there was a general outcry from many of the respondents. In their comments, they felt that the general appearance of the shopping area should be improved, and that the dilapidated buildings must

Plate 13: Deteriorated buildings and vacant lot. Building on the right had been vacant for over a year. Building on the left was converted from a residential dwelling. Both were vacant at the time of survey.

Plate 14: An isolated vacant building showing signs of extreme physical blight. Note the vacant lot beside the building.

Plate 15: Unattractive store frontage. Note the general disorderly arrangement of advertising signs and the falling walls.

Plate 16: A section of the older shopping area. Structures which were built in the early days of commercial expansion are, in most case, sub-standard for present commercial uses.

TABLE XVIII - RESPONDENTS' VIEWS ON THE POSSIBILITY OF RELOCATION IN THE NEAR FUTURE

Possibility of Relocation	Number of Respondents	Percentage
Yes	38	27.4
No	98	70.5
No response	3	2.1
Total	139	100.00

Source: Questionnaire data, 1969.

TABLE XIX - REASONS FOR LEAVING PRESENT LOCATION *

Reason	Frequency of Mention	Percentage
Unattractive building	14	16.28
Competition	1	1.16
Inadequate facilities	23	26.74
Traffic congestion	3	3.49
Lack of parking space	10	11.63
Low sales volume	7	8.14
Unattractive neighbourhood	7	8.14
High rent	8	9.30
Other	13	15.12
Total	86	100.00

Source: Questionnaire data, 1969.

* Reasons for leaving were given by a total of 38 respondents to Question 19.

be removed if their business was going to improve.

Traffic congestion has been considered as one of the principal factors in causing blight (Berry, 1963, p. 200; Simmons, 1966, p. 71; Baldwin, 1967, pp. 420 -422). It was observed that traffic congestion ranked the second highest position in causing operational problems (Table XX)

TABLE XX - PROBLEMS HINDERING RESPONDENTS' OPERATION OF BUSINESS

Problem	Frequency of Mention	Percentage
Lack of parking space	53	24.42
Traffic congestion	38	17.51
Decreasing sales volume	8	3.69
Unsuitable building and/or land	29	13.37
Competion	12	5.53
Poor neighbourhood	13	5.99
High rent	16	7.37
Other	16	7.37
None	32	14.75
Total	217	100.00

Source: Questionnaire data, 1969.

Traffic congestion along Whyte Avenue has largely been caused by the lack of east-west traffic routes in South Edmonton.[3] This has seriously overloaded Whyte Avenue and congested the intersections at

[3] The location of the Canadian Pacific Railway lines which are in the north to south direction in South Edmonton, has in many ways restricted the construction of east-west traffic arterials (Figures 1 and 5).

99th, 104th and 109th Streets. Cross river traffic from South Edmonton to areas north of the river is routed directly through the centre of the shopping area. The intersection of 104th Street and Whyte Avenue is presently seriously congested during peak traffic periods and interferes considerably with both the vehicular and pedestrian movement. One other factor which further aggrevates the present situation is the presence of the Canadian Pacific Railway right-of-way. The presence of the railway tracks not only physically bisects the shopping area, but train movements on the level crossing seriously hinder the east-west traffic flow on Whyte Avenue. With the re-zoning of the adjacent residential area to higher densities, and the proposed rapid expansion of the University of Alberta (Neal, 1969), traffic congestion will be an increasing problem unless improvement is forthcoming very soon by providing better accessibility and parking facilities.

Incompatible land uses also lead to the occurence of frictional blight. The " dead spots," which include religious buildings, institutions and hospitals have been regarded as undesirable elements in a shopping area (Lowden, 1958, p. 577; Koblyk, 1960, p. 58). These " dead spots " tend to break up the continuity of the shopping traffic (Plates 17 and 18). The location of the hospital and churches in the study area had been reported by many respondents as undesirable land uses. A few commented that the relocation of these establishments would greatly enhance the shopping area.

Functional Blight or Technological Obsolescence

As stated earier in this chapter, nonacceptance forms one of the most important elements in the concept of blight. The process of nonacceptance

Plate 17: Incompatible land use - church. Church has been regarded as an undesirable land use element in a shopping district.

Plate 18: Incompatible land use - hospital. Hospital has been regarded as an incompatible land use element in a shopping district.

involves functional depreciation or functional obsolescence of real property. Functional blight embodies this concept. Brown defines functional obsolescence as:

> When a structure becomes undesirable because of some aspect of its design or appearance, either external or internal, it is functionally obsolete. If the physical layout is not suited to present standards of maximum utility, it is functionally obsolete. If the fixture such as the elevators or furnace, become outmoded then the building is functionally obsolete (Brown, 1965, p. 263).

Berry states that functional blight arises from an imbalance on either the demand or supply side (Berry, 1963, p. 108). On the supply side, changing technology and retail methods have motivated a trend towards bigger store size and specialized building layout in order to obtain the maximum economies of scale and consumer efficiency (Downs, 1961, pp. 1-10). As a result of such changes, many commercial structures are rendered functionally obsolete. On the demand side, changes in mobility, shopping habits and income level also have the same effect. The traditional shopping areas find it difficult to adjust physically to the ever changing demands of people. Studies in other cities have shown that functional blight is one of the most serious problems affecting the urban area (Berry, 1963; Simmons, 1966, p. 30; The Metropolitan Toronto Planning Board, 1966, p. 12).

The present study noted that functional blight constitutes one of the most serious forms of commercial blight in the Whyte Avenue shopping area. "Lack of parking space" and "unsuitable building and/or land" had been identified as the major causal factors behind functional blight in the study area.

It can be noted that parking meters are installed on a substantial portion of the thoroughfare (Plate 19). As a result, congestion is frequently caused, especially during the rush hours (Plate 20). It is not unusual to find customers due to the lack of parking space parking their cars behind the main shopping area, some distance from their destination. Other forms of parking than free off-street parking have been regarded as being in basic conflict with the goal of creating an ideal shopping environment. "Any retail district which must count on using parking meters on a permanent basis is off to a sad start in the race for business," says Fisher (1950, p. 150). Studies have also demonstrated that parking is one of the most important factors in determining shopping satisfaction and orientation (Jonassen, 1953). From the questionnaire survey, it was noted that approximately 48 per cent of the respondents had free parking space for their customers, while the remaining 50 per cent apparently depended mainly on on-street parking (Table XXI and Plate 21).

TABLE XXI - CHARACTERISTICS OF PARKING ACCOMMODATIONS

Parking Accommodation	No. of respondents	Percentage
Free parking	67	48.20
No free parking	70	50.36
No response	2	1.44
Total	139	100.00

Source: Questionnaire data, 1969.

Plate 19: Parking meters on the major business section.

Plate 20: Traffic congestion.

Plate 21: Stores with free off-street parking space.

" Lack of parking space " was the most popular response to Question 21 which asks the operators to name the problems that hinder their business operation (Table XX). This problem was also cited as one of the prime factors for relocation (Table XIX). Unless something is done to keep pace with the needs created by the automobile, it cannot but have a detrimental effect on the study area.

Another factor contributing to functional blight is the inability of the present building structures to cope with the modern merchandising and servicing. As has been noted in the discussion of physical blight, a large proportion of the commercial structures were constructed before the last war, and not an insignificant portion of these were built in the early days of settlement. Their facades and fenestrations can still evoke images of an earlier day of commerce (compare Plates 6 and 16). A very significant proportion of the respondents (59.7 per cent) reported that they had made some improvements on the buildings during the period of occupancy (Table XXII) However, the

TABLE XXII - IMPROVEMENTS ON BUILDINGS MADE BY THE RESPONDENTS DURING THEIR PERIOD OF OCCUPANCY

Improvements on Buildings	No. of Respondents	Percentage
Yes	83	59.7
No	53	38.2
No response	3	2.1
Total	139	100.0

Source: Questionnaire data, 1969.

factor of "unsuitable building and/or land" was regarded by a substantial number of respondents as one of the most serious problems affecting their operations (Table XX). "Inadquate facilities" compounded with the problem of "unattractive building" were cited as the chief reasons for relocation (Table XIX). It appears that redevelopment or remodelling of many of the existing physical plants will be necessary if the Whyte Avenue commercial area is to be placed on a competitive basis with planned shopping centres.

Economic Blight

Commercial development is strongly competitive and more sensitive to a wider variety of factors within the local economy than most land uses. It is also highly market-oriented. Economic blight exists when changes on the demand side lead to losses of markets (Berry, 1963, p. 180). Lowering of the socio-economic level of the original market area; loss of population either through shifts within the urban area or out-migration; introduction of new competitors in the form of new shopping facilities; loss of functional links through the migration of other related functional activities; and the diversion of customers through the improvement or modification of highways (Garrison, et al., 1959) are some of the major factors that lead to the occurrence of economic blight, thereby creating a surplus of commercial space. High business turnover and decreasing sales volume experienced by a large number of commercial establishments may be indicative of the presence of economic blight.

Question 8 was designed to find out the length of occupancy of the respondents, in order to gain an insight into the state of business

turnover along the ribbon. The result of the question is presented in Table XXIII. It was observed that the business turnover in the study area

TABLE XXIII - RESPONDENTS' DATE OF LOCATION AT PRESENT SITE

Year	Number of Establishments	Percentage	Cumulative Percentage
Before 1951	22	16.30	
1951 - 1954	7	5.18	21.48
1955 - 1958	22	16.30	37.78
1959 - 1962	14	10.37	48.15
1963 - 1966	38	28.15	76.30
After 1966	32	23.70	100.00
Total	135	100.00	

Source: Questionnaire data, 1969.

was very high. This is supported by the fact that over 50 per cent of the respondents had been established in the study area for less than seven years. About one quarter (24 per cent) of the total had been in the study area for less than three years. This high business turnover can be related to business failures or relocation to other areas. However , without further research into the underlying reasons for the business turnover on the ribbon, the phenomenon of high business turnover is only of limited value in identifying economic blight in the study area.

A further inquiry into the problem of economic blight included a question on the business condition of the individual establishment. In Question 15, business situations were broadly classified into: " decreasing," " increasing " and " remaining the same." The overall

trade condition for the entire area is difficult to assess without going into the annual transactions of each and every individual establishment, and most of them are most reluctant to release statistics on trade. The results for Question 15 are given in Table XXIV. The data suggests that economic blight caused by decreasing business is not the

TABLE XXIV - RESPONDENTS' VIEWS ON BUSINESS CONDITION

Business Condition	Number of Establishments	Percentage
Decreasing	8	5.8
Increasing	96	69.1
Remaining the same	32	23.0
No response	3	2.1
Total	139	100.0

Source: Questionnaire data, 1969.

major problem in the study area.[4] This is supported by the fact that more than two-third of the total respondents (69.1 per cent) reported a rise in sales volume. This is furthered confirmed by the fact that approximately 18 per cent of the total respondents were planning for future expansion of their business (Table XXV). Twenty-three per cent of the respondents reported that their business had been "remaining the same". Only 5.8 per cent of the total respondents had experienced a decrease

4 This interpretation is made in the light of the non-response discussed in the introduction. It is possible that those operators who responded are more successful than who refused, or who have moved off the ribbon.

in business. Respondents who were experiencing a decrease in business transactions were mainly small businesses such as small grocery stores, cafe shops, barber and beauty shops and second-hand book stores. This

TABLE XXV - RESPONDENTS' VIEWS ON FUTURE EXPANSION OF THEIR BUSINESS

Plan to rent or buy more space	No. of respondents	Percentage
Yes	25	17.99
No	109	78.42
No response	5	3.59
Total	139	100.00

Source : Questionnaire data, 1969 .

may be due to a loss of population in the surrounding residential areas.[5] It was observed that "low sales volume" had been cited as one of the major factors for relocation, especially for the small businesses (Table XIX). Competition can be one of the major factors in causing a decline in business. However, in the study area, competition was regarded by only a relatively small proportion of the respondents (5.5 per cent) as one of the major problems hindering their business operation. This factor was cited by only one respondent as on of his main

5 An examination of the population in census tracts around the study area (Census tracts: 23, 24, 30 and 31) for the period 1961-1966, shows that there was a decrease of 5.5 per cent in population (Canada, Dominion Bureau of Statistics, 1968).

reasons for relocation. It should be noted, however, that competition may be regional or local. Merchants may not be aware of the competition that exists on a regional level, such as loss of patronage through the development of shopping centres. In general, economic blight in terms of decrease in business was not a widespread occurrence. Regional or local competition of the same product or service and loss of population in the district adjacent to the study area may be the causal factors behind the economic blight found in the Whyte Avenue commercial area.

VACANT SPACE AND COMMERCIAL BLIGHT

Vacancies in the study area were relatively high. Figure 26 depicts the distribution of vacant space in terms of floor areas in the various blocks on Whyte Avenue, while Figure 32 illustrates the distribution of vacant stores in terms of numbers. A store that was previously occupied by one commercial establishment and was vacant at the time of survey was considered as one vacant unit. By reference to Figure 26 and 32, it can be noted that there are two major concentrations of vacant stores. The highest concentration of vacant space was found between 103rd and 105th Streets which was the original shopping area of the Town of Strathcona. The next highest concentration was found on those blocks lying between 107th and 109th Streets on the north side of the street. Vacant space or stores in the study area have largely resulted from the various forms of commercial blight as detailed in this chapter.

There is a tendency for the vacant stores to be located in the older parts of the study area. There also appears to be a close

relationship between physical blight and the location of vacant stores. Note the coincidence of vacancies and the structurally deteriorated buildings as depicted in Figures 30 and 32. Among the total of 26 structures that were classified as "poor" by the Assessors Department, ten or 38.5 per cent of these had vacancies. Some of these structures have been vacant for more than a year. Lack of use has in many cases accelerated the natural process of deterioration. Those that are in an extremely run-down condition will probably remain vacant until they are demolished.

Another factor contributing to the occurrence of vacant stores can be related to the functional obsolescence of the buildings. This is especially true for many of the office buildings in the study area. A study on the potential office demand by the Watts Marketing Company in 1961 noted that the demand for modern office accommodation in Edmonton for the ensuing ten years was large (City of Edmonton, Planning Department 1963b, p. 58). The same study points out:

> Edmonton has reached the point where business and industrial firms are looking to higher grade office accommodation. Essentially this is not different from any other western metropolitan centre, but Edmonton's need is increasing rapidly. Edmonton business firms and other classes of office users are upgrading their standards of what they will accept in modern office accommodation (City of Edmonton, Planning Department, 1963b, p. 58).

Many office buildings built prior to the 1930s have become largely obsolete due to the lack of adherence to modern design principles. Even a number of the offices that were built in the late 1950s, although structurally sound, lack some of the facilities of modern office accommodation. For instance, many of these buildings are without air conditioning. It was pointed out by many retailers that air

conditioning has become a competitive sales feature, besides being a practical necessity. Good lighting is also of particular importance in Edmonton because of its short winter daylight hours. In addition, there are problems of parking shortage and lack of loading and unloading facilities. It is therefore not difficult to see the problem that older buildings have in maintaining full occupancy.

High vacancies in the study area also be related to the presence of frictional or environmental blight. Traffic congestion and the poor aesthetic quality of the shopping area, coupled with the existence of incompatible land uses, have been the major factors in forcing the relocation of some of the business operators.

It is difficult to attribute commercial vacancies in the study area to the occurrence of economic blight. There is no serious economic blight, in the sense that vacancies have not resulted mainly from a decrease in business and competition.

It should be noted that vacant stores may also be caused by factors other than the aforementioned forms of commercial blight. Personal reasons such as retirement as cited by a few respondents, can be one of the main reasons in forcing operators to leave their business. High rent, high taxes, and zoning regulations were some of the reasons mentioned by the respondents for leaving their present location.

PLANNING IMPLICATIONS

The problems of commercial blight, created by factors of obsolescence and deterioration as a result of the phenomenal growth of the urban area, call for a scientific understanding of the organization, distribution and linkages of human activities in space. Improved under-

standing of the urban system and human behavior will provide a better and firmer foundation upon which to base policy decisions. The problem of commercial blight makes demands of social scientists not only in the realm of theory but also in the realm of action. The conservation, rehabilitation and redevelopment of commercial districts, especially those along the ribbon, has not received the attention of city planners to a degree comparable with that given to large-scale and expensive redevelopment studies of residential blight. Programs need to be developed to a scale and degree of technical competence that is at least equal to that applied to other urban redevelopment problems. Since the role of the existing shopping districts in the economic base of a city is indisputable, it is essential that the conservation, rehabilitation and redevelopment of blight areas constitute an important part of the city planning and development program. Planning for commercial renewal must be flexible and dynamic, as planners are planning for a deversified group of commercial facilities. Long-run and short-run changes on the demand and supply side must be considered and anticipated if commercial blight is to be controlled and eliminated.

CHAPTER IV

RESPONDENTS' VIEWS ON THE CHOICE OF SHOPPING AREAS

The development of planned major and minor shopping centres, together with the presence of existing traditional shopping districts, namely the downtown and the principal shopping streets, has given the business operators on Whyte Avenue a much wider choice of location in order to obtain the maximun profit. In this respect, the question can be asked: Have commercial ribbon become obsolete in an era of planned nucleated shopping centres? In order to answer this question, it is essential to know what the operators who locate on ribbon consider to be the best location for their business. The purpose of this chapter, therefore, is to identify the locational preferences of the business operators who have responded to the questionnaire survey. The result of this investigation should provide some insight for geographers, planners, economists and others to determine whether there is a demand for the continued existence of commercial ribbons.

The information for this chapter was obtained primarily from Question 22 in the questionnaire (Appendix B). In this question, respondents were asked to state their preference for the following shopping areas: " downtown," " large planned shopping centre," "small planned shopping centre," "shopping street," and " other." The results are presented in Table XXIV. A total of 145 responses were obtained. It should be noted that a few respondents gave more than one locational preference. The preference of each type of shopping area will be analysed in turn.

TABLE XXVI - RESPONDENTS' VIEWS ON TYPES OF SHOPPING AREAS THEY PREFERRED

Type of Shopping Area	Frequency of Mention	Percentage
Downtown	13	8.96
Large planned shopping centre	37	25.31
Small planned shopping centre	12	8.28
Along a shopping street	58	40.00
Other	17	11.73
No response	8	5.52
Total	145	100.00

Source: Questionnaire data, 1969

SHOPPING AREA PREFERENCES

Downtown

Downtown is still one of the prime shopping centres in many cities. However, the primacy of many downtowns as the principal commercial outlet has been threatened by the same problems as those now facing commercial ribbon. The main problems for downtown shoppers are parking and congestion of pedestriants and vehicular traffic (Jonassen, 1953, p. 31). Despite the traffic hazards and parking problem, downtown still posesses a number of advantages which attract shoppers grom a large trade area. Studies have indicated at least three main adventages. These are: " a large selection of goods," " can do several errands at one time," and " cheaper prices" (Jonassen, 1953, p.51). Psychological reasons such as crowds, excitement, and sociability may also help to attract a large number of shoppers. Shops which depend

on a heavy pedestrian traffic will find a downtown location preferable. The result of the questionnaire analysis shows that thirteen or nine per cent of the responses would prefer downtown as a location for their business. Most of these responses were given by insurance and trust companies, professionals, and restaurants.

Large Planned Shopping Centre

The trend for retail or service outlets to be located in planned shopping centres is very apparent in Edmonton. To illustrate this phenomenon in 1961, about 85 per cent of land developed for commercial areas in the newly developed areas of Edmonton was being used by planned shopping centres. In 1954, only seven per cent of newly developed commercial land was used by the planned shopping centres in South Edmonton, but this percentage rose to 50 per cent in 1963 (City of Edmonton, Planning Department, 1963a, p. 92). From all indications, it appears that ribbon development has not kept pace in the establishment of new commercial outlets.

Studies on the attractions of shopping centres have indicated that planned shoping centres have eight principal advantages: " take less time to get there," " less walking required," "less tiring," " cost of transportation less," " the right people shop there," " keep open more convenient hours," and "easier parking" (Jonassen, 1953, p. 39). Although no empirical studies have been done for Edmonton, it is assumed that most, if not all these attractions do exist in many of the major shopping centres. This is supported by the apparent success of many of these shopping centres where vacancies are relatively low. In 1968,

vacancies in the major shopping centres were below one per cent which compares to over six per cent for the study area (Table VII).[1] Retailers are most sensitive to the demands of their customers. They tend to move to places where they can provide maximum convenience to their customers. It is therefore not surprising to find that a substantial proportion of the responses are in this category. Approximately 26 per cent of the responses considered that a large planned shopping centre would be the best location for them to do their business.

Small Planned Shopping Centre

Small planned shopping centres include neighbourhood or community shopping centres. This type of shopping centre is designed primarily to serve the community with convenience goods and services. Rent in this type of shopping area is more reasonable for many of the small businesses which cannot afford to locate in the large centres. Sufficient free parking space is provised. Approximately eight per cent of the responses fall in this category. Most of these responses came from the branch banks, dry cleaners, plumbers, barber and beauty shops.

Shopping Street

Commercial ribbon development has been frowned upon viewed with general disfavour by planners in general and traffic engineers in particular. The City Planning Department clearly states its planning principles concerning the future development of commercial land use in Edmonton: "... Strip commercial development along arterials should be discouraged in favour of a comprehensive planned, nucleated development"

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[1] Pers. Comm., City of Edmonton, Planning Department, July, 1968.

(City of Edmonton, Planning Department, 1967a, p. 53).

It should be stressed, however, that ribbon development is of great importance to many business operations, particularly automobile dealers who rely to a large extent upon advertising through street frontage and window display. This type of advertising is aimed at the large amount of passing traffic. In addition, visibility and indentification are important to almost all businesses and especially to small businesses. Many of the retail and service facilities will certainly be engulfed in the general mass of stores in a large planned shopping centres. Eetablishments located on the ribbons can obtain identification from a wide store frontage or large and more conspicious stores signs and billboards. Such advantages are minimized due to regulations of billboard and sign size in the planned shopping areas. The rent factor has a strong influence on the degree to which certain commercial establishments can choose from alternative locations. Generally, store rent in planned centres is higher than the rent on commercial ribbons (City of Edmonton, Planning Department, 1963a, p. 90).

In spite of the apparent problems found in the study area, as discussed in chapter III, there is a high proportion of business operators who favour ribbon locations. The highest proportion of responses, (40 per cent) was in favour of shopping street locations. These responses came mainly from (1) the automobile group, represented by new and used automobile dealers and service stations; (2) the hardware, furniture and household appliance group, which was largely represented by second-hand furniture stores and hardware stores; (3) real estate agencies and insurance companies; (4) the personal services group, which includes shoe repair shops and barber and beauty shops, and (5) grocery

stores.

Other Locations

Approximately 12 per cent of the responses were in the " other " category. A few responses replied that an industrial district would be the best location for them, since they carried on a wholesale trade. A few mentioned that they would like to locate near large establishments like department stores, and where there is a concentration of commercial activities. Nine respondents stated that location would be of no special significance to them, since their trade was mainly done through correspondence, mail or telephone orders. They were located at the present site because of the availability of the building or office.

PLANNING IMPLICATIONS

It was found that choices for the various types of shopping areas varied with the kind of businesses. By and large, a significant proportion of the respondents located along Whyte Avenue still regard that shopping streets would be best location for the operation of their business. This location is followed in order of importance by large planned shopping centres, the downtown, and small planned shopping areas.

In light of the data obtained for this study, it would seem that ribbon development, as a specific form of location is of great importance to some types of commercial facilities. It would not be advisable, therefore, for the planners to eliminate entirely the ribbon development; rather, planners should concentrate on reducing its disadvantages. Over ten years ago, (1959a, pp. 306-312) pleaded strong-

ly for the retention of ribbon development, though not necessarily in its present form, because he finds that the widespread occurrence of ribbon development is obviously a fundamental part of the overall commercial structure. He criticizes the contemporary planning concept which caters only to the needs of nucleated groups of business and ignores the needs of those on urban arterial routes. He remarks that, " there is particular need for zoning provisions for highway oriented and urban arterial types " (Berry, 1959a, p.311). Such comments should be borne in mind by city planners.

CHAPTER V

SUMMARY AND CONCLUSIONS

The problem of understanding the growth and decline of commercial ribbons in urban areas has been largely neglected. To help fill this void, this thesis has examined the evolution and the changing functional role of Whyte Avenue, a commercial ribbon in Edmonton, Alberta. Attention has also been given to the more crucial problems besetting the ribbon during a period of rapid urban expansion and technological change.

The present study followed a genetic approach in the analysis of the problem. The ribbon development was evaluated and explained in terms of its origin and processes of development. The changing form and functions were analysed by using information obtained primarily from Henderson's Directories for the years 1914, 1921, 1931, 1941, 1951 and 1961. In addition, information was collected from various government departments and field and questionnaire surveys contributed to an insight into the contemporary land use characteristics and the problems affecting the ribbon.

EVOLUTION OF THE COMMERCIAL DEVELOPMENT ON WHYTE AVENUE UP TO 1961

The commercial development on Whyte Avenue constitutes a special form of commercial structure in the urban landscape, and has evolved mainly through the processes of accretion, infiltration and replacement of commercial establishments along a street. These processes operated under the impetus of historical, geographic, economic and political factors at different periods of development. It was revealed that the development of the lineal form of commercial

structure was conditioned by a number of factors. Whyte Avenue was the principal business in the newly developed Town of Strathcona. The prime shopping area was located at the intersection of 104th Street and Whyte Avenue. The initial character of this shopping area was largely determined by the grid pattern streets and the location of the Canadian Pacific Railway Station. Whyte Avenue become one of the principal thoroughfares in the city and its location as the major line of mass transit for street-cars before 1950 and their subsequent replacement by trolly buses and motor buses, greatly enhanced the importance of the street as the main conduit for traffic. The zoning by-law of 1933 and subsequent amendments initially discouraged non-commercial development, but after the Second World War demand for commercial space was readily satisfied by the undeveloped portions of the ribbon. Housing expansion on the west and new subdivisions on the east tended to pull the commercial development towards them as retailers in most cases follow their customers. All these factors helped to strengthen the lineal form of development of the original nucleated commercial structure.

Throughout the period between 1914 and 1961, the differential development of commercial establishments along Whyte Avenue led to the growth of several sub-centres at several major intersections. This contributed to variation in the commercial development of various sections along the street. The highest density of commercial development, in terms of numbers of stores, was centred at the old business core at the intersection of 104th Street and Whyte Avenue. This section retained the highest density of development throughout the whole period

of analysis (1914 - 1961). The number of establishments tended to decrease with increasing distance from the original commercial core. However, the decrease was not uniform on both sides of this focal point, being interrupted by high density business development at the major cross-roads.

The oldest section also represented the greatest intensity of development in terms of building height and number of establishments accommodated within the block. This part of the ribbon had a continuous building frontage. The establishments found in these sections, in most cases, tended to be small in terms of operating space. Sections developed at a large date tended to have a disconnected and more open building frontage with fewer commercial establishments, most of which were associated with space consuming activities. It was found that density of development in terms of number of establishments varied for a particular side of the street. There tended to be a higher density of development on the northern rather than on the southern side of the street. These differences might be related to the variation of traffic volume and residential development on either side of the street . Developments on the northern side are exposed to the sun; consequently, the establishments on this side may benefit from a greater amount of visibility offered by such a location.

The areal extent of the commercial development changed in response to the general economic expansion of the city. The greatest development took place after World War II, and by 1961, most of the empty lots along the street were occupied.

THE CHANGING FUNCTIONS OF THE RIBBON, 1914-1961

Investigation into the functional change that took place along the commercial ribbon revealed some interesting facts. The area witnessed rapid growth of commercial activities during periods of economic prosperity and population growth, and decline during periods of economic depressions. In general, functional change occurred in response to the demands of a different era characterised by different levels of technology and by different social, economic and political restraints. The changing functional role of the ribbon was manifested by shifts in the number and kinds of commercial facilities within the various groups. It was demonstrated that the phenomenon of constant change in the composition of the various business groups was one of the chief characteristics of the ribbon. It was observed that the complexity and diversity of the commercial facilities found on the ribbon increased between 1914 and 1961, and that the relative importance of each of the major types of commercial facilities fluctuated at different periods of city growth. After 1921, the two largest activity groups, retail and service, had an almost equal proportion in terms of number of establishments. However, the tendency for the service group to take an ascending role within the commercial structure became quite apparent, especially in 1961. This change can be attributed primarily to the decline in three types of firms: (1) the food stores; (2) the general merchandise stores; and (3) the apparel stores. Activities in the finance and the personal services group contributed much to the gains within the service category. Other significant changes found along the ribbon include the increasing number and the

growing importance of space consuming activities, primarily facilities related to the automobile group.

NATURE AND FUNCTIONS OF THE RIBBON DEVELOPMENT ON WHYTE AVENUE, 1968

The conclusion from this investigation is that the functional component of the ribbon is both complex and diverse. Three hundred and twenty-one business establishments were recorded during the field survey of 1968. These represent eleven major groups, covering a total of seventy-one kinds of retail and service facilities. The ribbon shows the basic character of a neighbourhood mix: small grocery stores, eating places, drug stores, barber and beauty shops, laundry shops and banks. On the other hand, it also has a typical regional shopping mix: a department store, hardware and furniture stores, men and women's clothing stores, recreational places and other less ubiquitous goods and services.

It was noted that few types of business categories were dominated by a large number of establishments. Only restaurants, barber shops, beauty salons, real estate agents and finance and loan companies were represented by ten or more establishments each. These occupied roughly 21 per cent of the total establishments in the study area. In terms of numbers, the street is dominated by personal services establishments. General merchandise stores occupied the least significant position (1.55 per cent of the total). Some interesting observations arise with regard to the nature of space consumption of the various types of businesses. It was found that the automobile group, which accounted for eight per cent of the total number of establishments,

consumed nearly one-third of the total operating space in the study area. On the other hand, the personal services group, which ranked first in terms of numbers (19.25 per cent of the total), occupied only the fourth position (8.73 per cent) in total operating space.

The analysis indicated that a significant portion of the commercial activities in the study area can be regarded as small businesses. From the returned questionnaire, it was found that about 73 per cent of the respondents were renters or leaseholders. Of the total responses, 64 per cent reported that they had five or less employees. The largest units, that is, those employing twenty or more employees formed only ten per cent of the total, and was largely represented by the automobile, community services, and furniture, hardware and household appliance groups. Forty-nine per cent of the 136 respondents had a selling space of less than 1,000 square feet, and only 24 per cent had over 2,000 square feet.

Although Whyte Avenue is primarily dominated by small businesses, there is a trend toward large establishments. Increasing numbers of space consuming activities, such as firms in the automobile group, are located along the ribbon. Functions that are primarily serving an automobile-oriented public have also increased. These are exemplified by drive-in restaurants, car-wash and polishing services, and supermarkets. It is probable that more drive-in activities will come to the ribbon as more and more people tend to shop or carry out their business in automobiles. The decline of general merchandise and clothing stores has, to a certain extent, diminished the importance of the ribbon as a centre for certain types of shopper's goods, especially those in

the style and fashion category.

With regard to the spatial distribution of the establishments, it was shown that they are unevenly distributed along the ribbon. The older sections of the shopping area often display a relatively higher concentration of development both in terms of operating space and number of establishments. Corner locations, in most cases, are occupied by banks or service stations. Isolated, undeveloped lots are often occupied by used-car lots. The more extensive activities, including automobile sales and community services, tend to be located away from the highest land value intersection on the ribbon. The leading automobile sales companies have tended to aggregate in an "automobile row" which is located at the west end of the ribbon. Furniture stores are usually located in older and rather dilapidated structures where the rent is relatively low and larger display space is available. Establishments in the finance group are widely distributed, with banks usually occupying corner lots and finance and loan companies found on the upper floors of office buildings. Personal services are widely distributed along the commercial ribbon. There appears to be a trend for several of the high-rise buildings west of 109th Street to incorporate some of these services into their building complex. Other functions such as the medical, legal and professional services are often located on the upper floors of office buildings.

An examination of the location factors of the individual establishments in the study area showed that locational factors differ. Of the various reasons given, it was found that the greatest emphasis was placed on factors of nearness to passing traffic, availa-

bility of parking space, and suitable building and/or land. Considerable importance was attached to proximity to bus lines and good neighbourhoods. Factors such as types of adjacent businesses on the strip, low rent and proximity to the University of Alberta did not seem to be very important in the locational decision making process for the majority of respondents. But it was revealed that other factors when combined with the aforementioned often influenced locational decisions. Among these, the personal preference factor was the most frequently mentioned.

MAJOR TYPES OF COMMERCIAL BLIGHT

The study has revealed that the Whyte Avenue is suffering from various forms of blight in varying degrees. By far the most serious form of blight in the study area appears to be functional. Lack of modern facilities in the outmoded structures, indequate parking space, limited operating space and obsolete building layout are the most common problems encountered in the study area. Lack of parking space and unsuitable building and/or land were the major problems listed by a large proportion of the respondents.

Frictional or environmental blight is the next major form of blight affecting the study area. It is largely related to the problems of a poor aesthetic environmental quality, traffic congestion and incompatible land uses. Poor aesthetics are generated by the unsightly hodge-potch display of advertising billboards and signs, the presence of dilapidated structures and the presence of vacant stores. Traffic congestion is largely caused by the large volume of traffic passing through the shopping area and the presence of curb-parking along the street. The presence of large, space-consuming activities such as

churches, the hospital and the railway right-of-way, tend to break-up the continuity of the shopping area, thereby greatly reducing the attractiveness of the shopping area especially for pedestrian shoppers.

Physical blight is characterized by the occurrence of a substantial number of sub-standard structures. As a consequence of aging and lack of maintenance, a majority of the structures which were built prior to 1930 have reached an advanced stage of decay.

One of the most striking facts revealed by the questionnaire survey was that economic blight does not seem to be the most prevalent problem facing the business operators. Relatively few respondents reported that they had experienced a decline in business. Most of them reported an increase in their business, and others were planning expansion. However, economic blight seems to be affecting small businesses, mainly in the retailing of food. This conclusion must also be qualified by recognizing the possible bias introduced by the non-response to the questionnaire survey.

In an era of rapid technological change, it is not surprising to find that the advantages which once accrued to the lineal form of commercial development have gradually diminished. With the pull of planned, integrated shopping centres and the push of the various forms of commercial blight, some businesses are leaving the ribbon. Vacant stores and rapid turnover of businesses are not uncommon features to the street. It is suggested that the vacant stores are largely a result of the physical deterioration and obsolescence of facilities.

The study found that structure deterioration, general building obsolescence, traffic congestion, incompatible land uses and the poor aesthetic quality of the shopping environment present a real threat to

the prosperity of the Whyte Avenue shopping area. The area will probably survive for a good many years to come. However, it is unlikely that it will be able to compete with newly developed planned shopping centres which will undoubtedly account for most of the expansion of commercial facilities in the next decade. If no constructive measures are forthcoming to keep pace with the needs of both the shoppers and the shopkeepers, the general business climate on the ribbon will probably disintegrate rapidly in the face of competition, such as the new Southgate Regional Shopping Centre which is due to open in 1970.

PLANNING IMPLICATIONS OF THE STUDY

By and large, commercial ribbons still present desirable locations for those businesses that are oriented to both the nearby areas and the passing traffic, and to businesses that require great visibility. The older commercial structures in the established shopping streets are often attractive to small businesses because of relatively cheaper rent. An analysis of the locational preferences based on the returned questionnaires was presented in Chapter IV. Some interesting results were obtained from this analysis. A total of 145 responses were obtained from the questionnaire survey. Forty per cent were in favour of the shopping streets; approximately 26 per cent had definite preferences for locating in the large planned shopping centres; approximately nine per cent favoured a downtown location; and about eight per cent preferred a site in small planned shopping centre; and the rest wanted some other type of locations.

The findings of this study thus reveal that there exists a demand by certain business for a linear shopping area, and that the urban

businesses require not only the nucleated, but also the linear forn of development. At present, planning concepts mainly concede the findings, it is realized that there is an urgent need to broaden this limited planning concept. On the other hand, ribbon development in its present form has obvious disadvantages. The conclusion would seem to be a new form of shopping area which will satisfy both the requirements of certain businesses, and at the same time eliminate the disadvantages of the ribbon, such as impairing the efficiency of the traffic artery and the envirnmental desirability of the shopping and surrounding areas. In short, the value of a ribbon location should be re-evaluated in light of the findings of this study.

SUGGESTIONS FOR FURTHER RESEARCH

The present study of the commercial ribbon development on Whyte Avenue is by no means exhaustive. It is a subject which is indeed wide and complex. The subject merits further study in order that possible ways to control the future occurrence of blight and improve the efficiency of the ribbon may be formulated. Insights provided by this investigation point to the desirability of conducting similar studies of other ribbons in the city. Much can be gained from a comparative study of commercial ribbons in cities of various sizes and economic development.

The study focused mainly on business operators with regard to their role in the functions of the ribbon. No direct attention was paid to consumers. It would be desirable, therefore, to conduct a series of consumer surveys to determine the functional role and related

aspects of the commercial ribbon in the land use structure from a consumer's point of view.

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APPENDICES

APPENDIX A

CLASSIFICATION OF BUSINESS TYPES[1]

Food Group

- Supermarkets
- Bake shops
- Candy and confectionery stores
- Dairy products stores
- Delicatessen stores
- Food stores, grocery and meat markets
- Fruit and vegetable markets
- Meat markets
- Food stores not elsewhere classified

General Merchandise Group

- Department stores
- General stores (variety stores)
- Other general merchandise stores not elsewhere classified

Automobile Group

- Automobile accessory, parts, tire and battery shops
- Gasoline service stations
- Car washing and polishing
- Motor vehicle dealers (new and used)
- Motor vehicle dealers (used only)
- General auto repair
- Other retailers of automotive products not elsewhere classified

Apparel and Accessories Group

- Shoe stores
- Men's clothing sotres
- Women's clothing sotres
- Family clothing sotres
- Millinery shops
- Other apparel and accessory shops not elsewhere classified

Hardware, Furniture and Household Appliances Group

- Hardware stores
- Paint, glass and wallpaper sotres
- Curtains and draperies
- Floor coverings
- Furniture sotres
- Household appliance sotres
- Radio and television sotres
- Second-hand furniture sotres

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1 Modified from Dominion Bureau of Statistics, Standard Industrial Classification Manual, Ottawa: Queen's Printer, 1960.

Hardware, Furniture and Household Appliances Group

Household furnishing stores not elsewhere classified
Radio, television and electrical appliance repair stores

Other Retail Stores

Drug stores
Book stores
Stationery stores
Florists's stores
Jewellery stores
Bicycle shops
Liquor stores
Tabacconists
Boats and marine supplies
Cameras and photographic supplies
Gift and novelty shops
Hobby shops
Luggage and leather goods stores
Music stores
Optical goods stores
Record stores
Sporting goods stores
Other retail stores not elsewhere classified

Finance Group

Banks
Finance and loan companies
Mortgage companies
Trust companies
Savings and credit institutions
Investment and security companies
Insurance agents and companies
Real estate operators
Other financial, insurance and real estate services not elsewhere classified

Community Services

Commercial and business schools
Hospitals
Offices of physicians
Offices of dentists
Offices of chiropractors
Other health services not elsewhere classified classified
Religious organizations
Motion picture theatres
Bowling alleys and billiard parlours
Other recreational facilities not elsewhere classified

Personal Services

Shoe repair shops
Barber shops
Beauty shops
Cleaning and laundering services
Restaurants
Restaurants, drive-in
Hotels
Dressmaking
Other personal services not elsewhere classified

Services to Business Group

Accountancy services
Advertising services
Engineering and scientific services
Legal services
Blueprinting and duplicating services
Other business services not elsewhere classified

Miscellaneous Services Group

Photography
Repair shops not elsewhere classified
Services to buildings and dwellings
Equipment rentals
Miscellaneous services not elsewhere classified

WHYTE AVENUE STUDY

APPENDIX B

QUESTIONNAIRE SAMPLE

Department of Geography
UNIVERSITY OF ALBERTA
EDMONTON 7.

STRICTLY CONFIDENTIAL

Dear Sir or Madam:

I am a graduate student at the University of Alberta and am at present gathering data for my Master's thesis which is concerned with the pattern of, and the reasons for the location of commercial firms along major shopping streets.

Would you please complete and return this questionnaire in the enclosed self-addressed stamped envelope as soon as possible? Your time and co-operation is greatly appreciated. The success of this project depends upon your assistance. Thank you very much.

Norah Chow

Norah Chow

---

1. NAME AND ADDRESS OF BUSINESS — Name ....

   Address ....

---

2. FORMER ADDRESS (if applicable) OF BUSINESS ....

---

3. KIND OF BUSINESS ....

---

4. DO YOU OWN THE BUILDING?

   Yes ☐ No ☐

Please tick correct box

---

5. HOW MANY PEOPLE ARE EMPLOYED BY YOUR FIRM?

0 ☐	11 - 15 ☐
1 - 5 ☐	16 - 20 ☐
6 - 10 ☐	over 20 ☐

Please tick correct box

---

6. HOW MANY SQUARE FEET OF SELLING SPACE DO YOU HAVE?

Less than 200 ☐	801 - 1000 ☐
201 - 400 ... ☐	1001 - 1500 ☐
401 - 600 ... ☐	1501 - 2000 ☐
601 - 800 ... ☐	Over 2000 ☐

Please tick correct box

---

please turn to next page

7. WHAT IS YOUR ANNUAL RENT PER SQUARE FOOT?

Please tick correct box

- Below $1.00 ☐
- $1.00 - $1.50 ☐
- $1.51 - $2.00 ☐
- $2.01 - $2.50 ☐
- $2.51 - $3.00 ☐
- $3.01 - $3.50 ☐
- Over $3.50 ☐
- Owner Occupied ☐
- Other ....

8. WHEN DID YOU OPEN YOUR BUSINESS AT THE PRESENT SITE?

Year ....

9. HOW EXTENSIVE IS THE AREA YOUR BUSINESS SERVES?

Please tick correct box

- Your own neighborhood ☐
- All of Edmonton ..... ☐
- All of Alberta ...... ☐
- Other (specify) ....

10. HOW WOULD YOU DESCRIBE THE PHYSICAL CONDITION OF THE BUILDING WHICH YOU OCCUPY?

Please tick correct box

- Good .... ☐
- In need of minor repair ☐
- In need of major repair ☐
- Other (specify) ....

11. BELOW IS A LIST OF POSSIBLE REASONS AS TO WHY YOU LOCATED AT YOUR PRESENT SITE. PLEASE RATE EACH OF THESE REASONS BY TICKING THE APPROPRIATE BOX IN THE TABLE BELOW.

Reasons	Very Important	Somewhat Important	Not Important
Suitable building/land			
Sufficient parking space			
Near to passing traffic			
Good neighborhood			
Types of business in the area			
Near to bus line			
Low rent			
Near to University			
Other (specify)			

12. HOW WOULD YOU DESCRIBE THE GENERAL APPEARANCE OF WHYTE AVENUE?

Please tick correct box

- Attractive ☐
- Fair ☐
- Unattractive ☐
- Other (specify) ....

13. HOW DO YOUR CUSTOMERS TRAVEL TO YOUR BUSINESS. (please list <u>in order of importance</u> - 1, 2, 3, and 4)

- Walk ☐
- Bus ☐
- Car ☐
- Other (specify) ....

14. ARE YOUR CUSTOMERS -

Please tick correct box

- Mostly regular ☐
- Mostly new-comers ☐
- About the same ☐

15. IS YOUR BUSINESS SALES VOLUME -

Please tick correct box

- Decreasing ☐
- Increasing ☐
- Remaining the same ☐

16. DOES YOUR BUSINESS OFFER FREE PARKING SPACE TO CUSTOMERS? Yes ☐ No ☐

17. HAVE YOU MADE ANY IMPROVEMENTS TO YOUR BUILDING DURING YOUR PERIOD OF OPERATION? Yes ☐ No ☐

18. DO YOU PLAN TO RENT OR BUY MORE SPACE IN THE NEAR FUTURE? Yes ☐ No ☐

19. ARE YOU LIKELY TO CHANGE THE LOCATION OF YOUR BUSINESS IN THE NEAR FUTURE? Yes ☐ No ☐

(if "yes" please answer question no. 20; if "no" go on to question 21)

20. PLEASE CHECK ANY APPLICABLE REASON OR REASONS FOR LEAVING YOUR PRESENT LOCATION -

Please tick correct box

- Unattractive building ..... ☐
- Competition .... ☐
- Inadequate facilities ..... ☐
- Traffic congestion .... ☐
- Lack of parking space ..... ☐
- Low sales volume .... ☐
- Unattractive neighborhood . ☐
- High rent .... ☐
- Other (specify) ....

21. DO ANY OF THE FOLLOWING PROBLEMS HINDER THE OPERATION OF YOUR BUSINESS?

Problem	Yes	No
Lack of parking space		
Traffic congestion		
Decreasing sales volume		
Unsuitable building/land		
Competition		
Poor neighborhood		
High rent		
Other (specify)		

Please tick correct box

22. WHAT KIND OF SHOPPING AREA DO YOU THINK WOULD BE THE BEST FOR YOU TO DO YOUR BUSINESS?

- Downtown .... ☐
- Large Planned Shopping Centre ☐
- Small Planned Shopping Centre ☐
- Along a shopping street ..... ☐
- Other (specify) ....

Please tick correct box

23. PLEASE USE THIS SPACE AND THE BACK OF THIS PAGE FOR ANY ADDITIONAL REMARKS YOU WOULD LIKE TO MAKE REGARDING THIS QUESTIONNAIRE AND THE LOCATION AND OPERATION OF YOUR FIRM:

APPENDIX C

QUESTIONNAIRES RETURNED FROM EACH TYPE OF BUSINESS

Type of Business	Number of questionnaires sent*	Number of response	Percentage
Food group	25	9	36.00
General merchandise	4	1	25.00
Automobile group	21	8	38.10
Apparel & accessories	11	6	54.55
Hardware, funiture & household appliances	32	16	50.00
Other retail stores	35	18	51.43
Finance group	46	33	71.74
Community services	19	8	42.11
Personal services	57	24	42.11
Services to business	27	8	29.63
Miscellaneous services	11	8	72.73
Total	288	139	48.26

*Excluding the movers.

APPENDIX D

EDMONTON'S POPULATION GROWTH, 1899 - 1968

Year		Population	Year	Population
1899	Edmonton	2,212C	1939	90,419C
	Strathcona	1,156D	1940	91,723C
1901	Edmonton & Strathcona	4,176D	1941	93,924C
1903		6,995C	1941	93,817D
1906		14,088D	1942	96,725C
1907	Strathcona only	3,500C	1943	105,536C
1909		27,000C	1944	108,416C
1911		31,064D	1945	111,745C
1912		53,611C	1946	114,976C
1913		67,243C	1946	113,116D
1914		72,516C	1947	118,541C
1915		59,339C	1948	126,609C
1916		53,846D	1949	137,469C
1917/1919		-----	1950	148,861C
1920		61,045C	1951	158,912C
1921		58,821D	1951	158,709D
1922/1923		-----	1952	169,196C
1924		63,160C	1953	183,411C
1925		65,378C	1954	197,835C
1926		65,163D	1955	209,353C
1927		67,083C	1956	223,549C
1928		69,744C	1956	224,003D
1929		74,298C	1957	238,353C
1930		77,557C	1958	252,131C
1931		79,059C	1959	260,733C
1931		79,197D	1960	269,314C
1932		78,387C	1961	276,018C*
1933		79,231C	1962	294,967C
1934		79,773C	1963	303,756C**
1935		82,634C	1964	357,696C
1936		85,470C	1965	371,265C
1936		85,696D	1966	381,330C
1937		87,034C	1967	393,563C
1938		88,887C	1968	410,105C

* Beverly Annexation ** Jasper Place Annexation

Code: C - Civic Census
D - Dominion Census

Source: CITY ASSESSOR